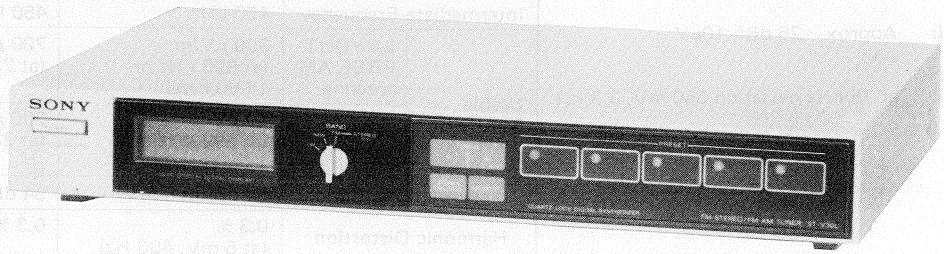
ST-V30L

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

GENERAL

System: PLL quartz-locked digital synthesizer system
FM stereo, FM/AM superheterodyne tuner

Power Requirements: AEP model: 220 V ac (or 240 V ac adjustable by authorized Sony personnel), 50/60 Hz
UK model: 240 V ac (or 220 V ac adjustable by authorized Sony personnel), 50 Hz
Memory back-up power: 3 V dc, two batteries, IEC designation R6 (size AA)
Battery life: approx. 1 year with Sony SUM-3(NS) New Super batteries

Power Consumption: 9 watts

Dimensions: Approx. 355(w) x 55(h) x 265(d) mm
14(w) x $2^1/_4$ (h) x $10^1/_2$ (d) inches
including projecting parts and controls

Weight: Approx. 2.2 kg, 4 lbs 15 oz net
Approx. 2.8 kg, 6 lbs 3 oz in shipping carton

FM TUNER SECTION

Tuning Range: 87.5 MHz – 108 MHz

Antenna Terminals: 300 Ω, balanced
75 Ω, unbalanced
ST-V30L available in West Germany only:
75 Ω, IEC connector

Intermediate Frequency: 10.7 MHz

	ST-V30L (at 40 kHz deviation)
Sensitivity	at 46 dB quieting 17.3 dBf, 4 μV (mono) 38.3 dBf, 45 μV (stereo)
Usable Sensitivity	10.3 dBf, 1.8 μV (1HF) 1.7 μV (S/N=26 dB)
Signal-to-noise Ratio	76 dB (mono) 71 dB (stereo)
Harmonic Distortion at 1 kHz	0.15 % (mono) 0.3 % (stereo)
IM Distortion	0.15 % (mono) 0.3 % (stereo)
Separation at 1 kHz	45 dB
Frequency Response	40 Hz–12.5 kHz ±0.5 dB 30 Hz–15 kHz $^{+0.5}_{-2.0}$ dB
Selectivity	at 300 kHz 70 dB

– Continued on page 2 –

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

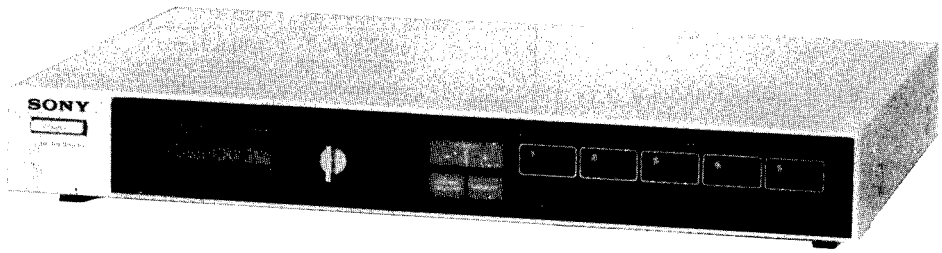
SONY®

AUD

ST-V30L

SERVICE MANUAL

AEP Model
UK Model



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– Continued on page 2 –

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MICROFILM

SONY®

AUD

Capture Ratio: 1.0 dB

AM Suppression Ratio: 54 dB

Image Response Ratio: 50 dB

IF Response Ratio: 90 dB

Spurious Response Ratio: 70 dB

RF Intermodulation: 60 dB (1HF)

Muting Threshold: Approx. 25 dBf, 10μV

Output Level/impedance: at 75 kHz deviation 550 mV, 3.3 kΩ

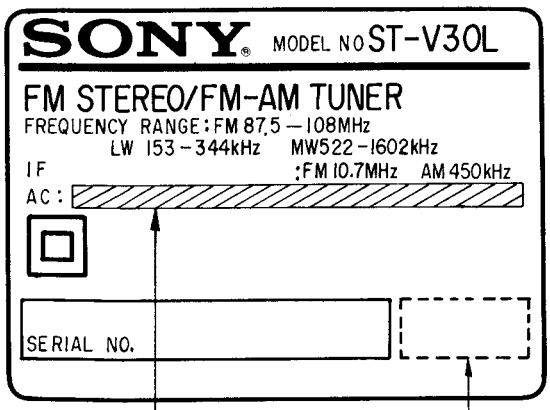
MW/LW TUNER SECTION

		MW	LW
Tuning Range		530kHz–1.610kHz (at 10kHz step) 531kHz–1.602kHz (at 9kHz step)	153kHz–344kHz
Antenna		LAYOUT-FREE AM antenna	
		external antenna terminal	
Intermediate Frequency		450 kHz	450 kHz
Usable Sensitivity	LAYOUT-FREE AM antenna	300 μV/m (at 999 kHz or 1.000 kHz)	700 μV/m (at 230 kHz)
	external antenna	30 μV (at 999 kHz or 1.000 kHz)	200 μV (at 230 kHz)
Signal-to noise Ratio		54 dB (at 5 mV)	54 dB
Harmonic Distortion		0.3 % (at 5 mV, 400 Hz)	0.3 %
Selectivity		35 dB (9 kHz) 38 dB (10 kHz)	35 dB (9 kHz)

While the information given is true at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in the specifications. We would ask you to check with your appointed Sony dealer if clarification on any point is required.

MODEL IDENTIFICATION

– Specification Label –


SONY MODEL NO ST-V30L
FM STEREO/FM-AM TUNER
FREQUENCY RANGE: FM 87.5 – 108MHz
LW 153 – 344kHz MW522 – 1602kHz
IF :FM 10.7MHz AM 450kHz
AC :
SERIAL NO.

AEP model: 220V 50/60Hz 9W
UK model: 240V 50/60Hz 9W

FTZ

(G-AEP model)

FEATURES

The Sony ST-V30L FM stereo/FM-AM tuner provides accurate and easy tuning with digital synthesizer system in a remarkably compact cabinet.

- The quartz-locked frequency-synthesizer system allows accurate and stable tuning that is not affected by temperature variations or long period usage.
- Each station preset button allows you to memorize 3 stations: one station for each band, and to select these memorized stations with the touch of a button.
- In the manual tuning mode, quick and accurate station selection is possible with an electronic digital readout on the frequency display window.
- The back-lighted LCD (liquid crystal display) window clearly shows the frequency received, band, tuning, muting, memory standby and the selected station preset button number.
- The memory back-up batteries retain the memory contents when the power is turned off.
- An FM muting circuit is incorporated to eliminate any interstation noise.
- Slim, smart case.

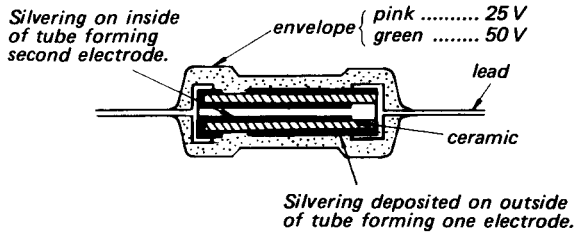
SERVICING NOTE

CERAMIC CAPACITOR

This set uses tube-type ceramic capacitors whose shape is identical with the carbon resistors. Be careful not to use resistors instead of capacitors in repairing.

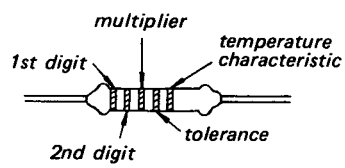
Disc-type ceramic capacitors can be used for replacing those originally used in the set.

Two kinds of drilled holes are provided in some patterns for mounting the tube-type and disc-type ceramic capacitors. Use appropriate holes where applicable.

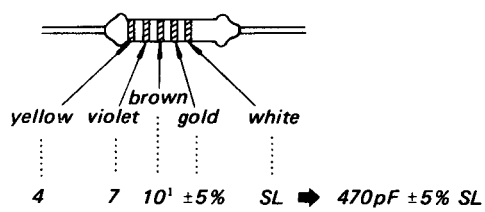

Silvering on inside of tube forming second electrode.
envelope
pink ..... 25 V
green ..... 50 V
lead
ceramic
Silvering deposited on outside of tube forming one electrode.

COLOR CODE (in pF)

Color	1st or 2nd Digit	Multiplier	Tolerance	Temperature characteristic
brown	1	10^1		Y
red	2	10^2		D
orange	3	10^3		
yellow	4	10^4		RH
green	5			
blue	6			
violet	7			UJ
gray	8		±30%	X
white	9			SL
black	0	10^0	±20%	CH
gold		10^{-1}	± 5%	V
silver		10^{-2}	±10%	B



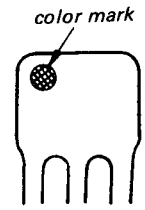
Example:



• IF OFFSET ADJUSTMENT (FM IF)

Diode Installations Depending on the Ceramic Filters (CF201 – 203)

This set employs three ceramic filters (CF201 – 203) which should have the same colour marking to identify their center frequency. Therefore FM IF offset adjustment by diodes (D604 – 605) installation is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.

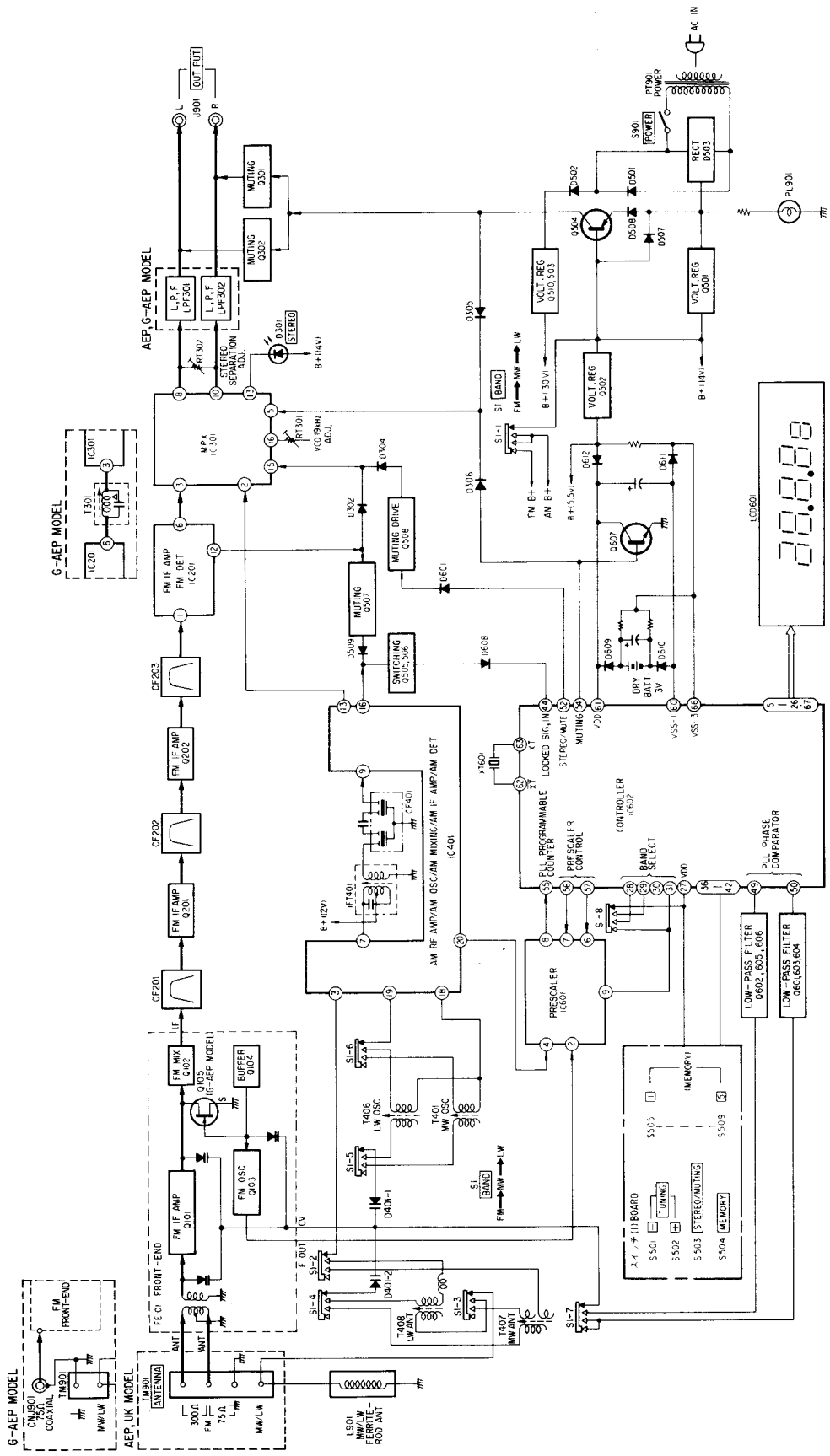


Ceramic filter		Diode installation		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	D604	D605	
White	10.750	X	○	10.750
Red	10.700	X	X	10.700
Black	10.650	○	X	10.650
				○: installed X: not installed

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i.e., of same colour coding should be used for CF201 through CF203.

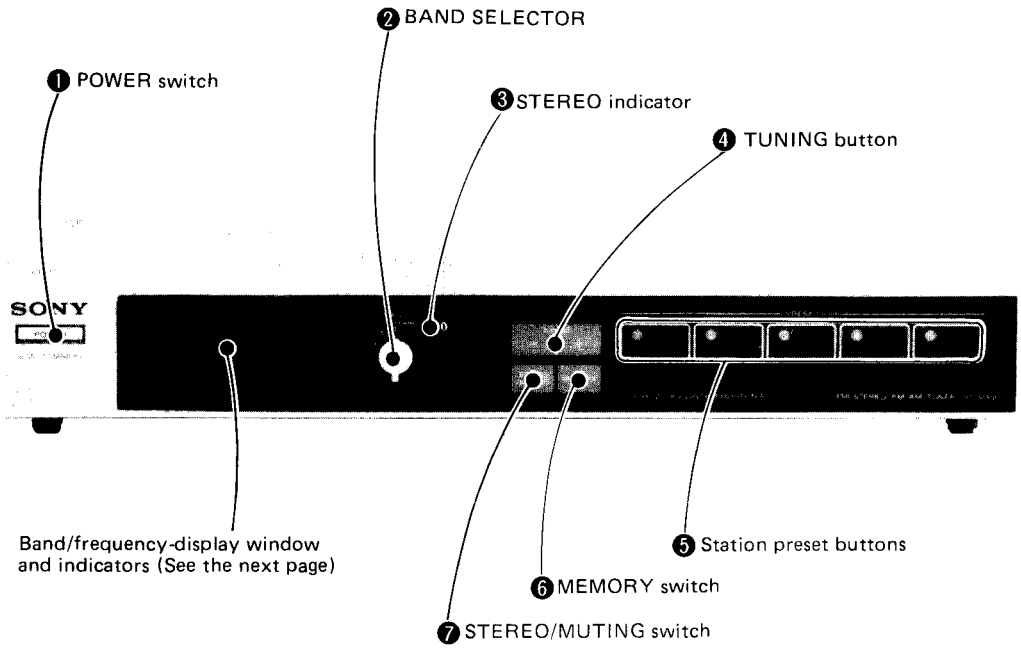
SECTION 1
OUTLINE

1-1. BLOCK DIAGRAM



1-2. LOCATION AND FUNCTION OF CONTROLS

Each number in the photo is keyed to the descriptive text.



❶ POWER switch
Depress to turn on the power. To turn the power off, press the switch again.

❷ BAND SELECTOR
Selects the desired band: FM, MW or LW. The selected band will be indicated in the band/frequency-display window.

❸ STEREO indicator
This indicator will light when an FM stereo program of sufficient signal strength is tuned in with the STEREO/MUTING switch engaged.

❹ TUNING button
Press either side of this button to change the frequency. Press the left side (-) to go to a lower frequency and the right side (+) to go to a higher. To change the frequency continuously until the desired frequency is received, keep the button depressed. The frequency figures will change rapidly. To change the frequency slowly, successively press and immediately release the button.

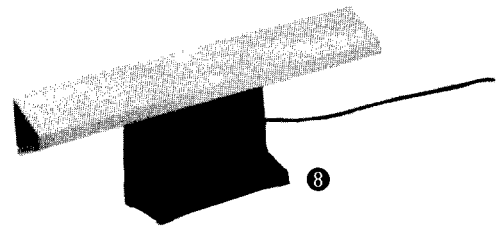
❺ Station preset buttons
To call up a memorized station, press the appropriate button.

❻ MEMORY switch
Press to operate memory circuit. The MEMORY indicator will appear in the band/frequency-display window for a few seconds indicating that the memory circuit is standing by.

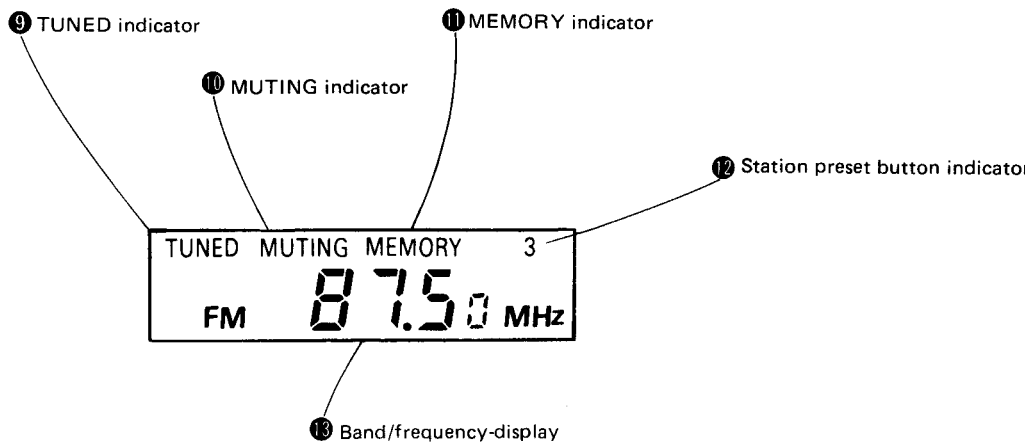
❼ STEREO/MUTING switch
This switch serves the dual purpose of a mode and FM muting switch. Normally keep this switch engaged (the MUTING indicator illuminates) to eliminate FM interstation noise while tuning from station to station. The tuner operates in stereo mode for stereo sound sources and will be automatically switched to mono mode for monaural sound sources.
When you want to tune in a very weak station, or when an FM program is too noisy, press the switch to disengage it. (The MUTING indicator will go out.) This will enable the tuner to receive weak stations, although the stereo feature is sacrificed. In this case, keep the amplitier volume down to avoid speaker damage caused by the interstation noise.

– Continued on page 6 –

❽ LAYOUT-FREE AM external ferrite-bar antenna
For AM (MW/LW/SW) reception, always connect this antenna to the AM (MW/LW) ANTENNA terminal on the rear panel. Position the LAY-OUT-FREE antenna for best reception.



BAND/FREQUENCY–DISPLAY WINDOW AND INDICATORS



❾ TUNED indicator
This indicator illuminates when a sufficiently strong signal is tuned in.

❿ MUTING indicator
This indicator illuminates when the STEREO/MUTING switch is engaged in FM reception.

⓫ MEMORY indicator
When the MEMORY switch is pressed, "MEMORY" will appear for a few seconds indicating that the memory circuit is standing by.

⓬ Station preset button indicator
When the station preset button is pressed, a figure from 1 to 5 corresponding to the pressed button will appear.

⓭ Band/frequency-display
Permits reading the received frequency at a glance from the figures.

SECTION 2
DISASSEMBLY

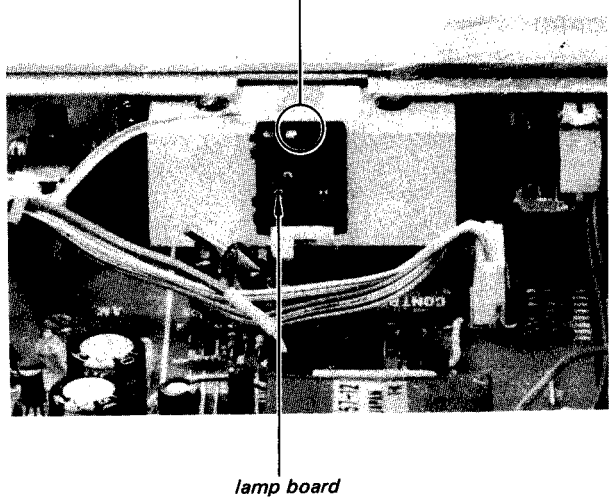
REMOVAL

Note: Follow the disassembly procedure in the numerical order given.

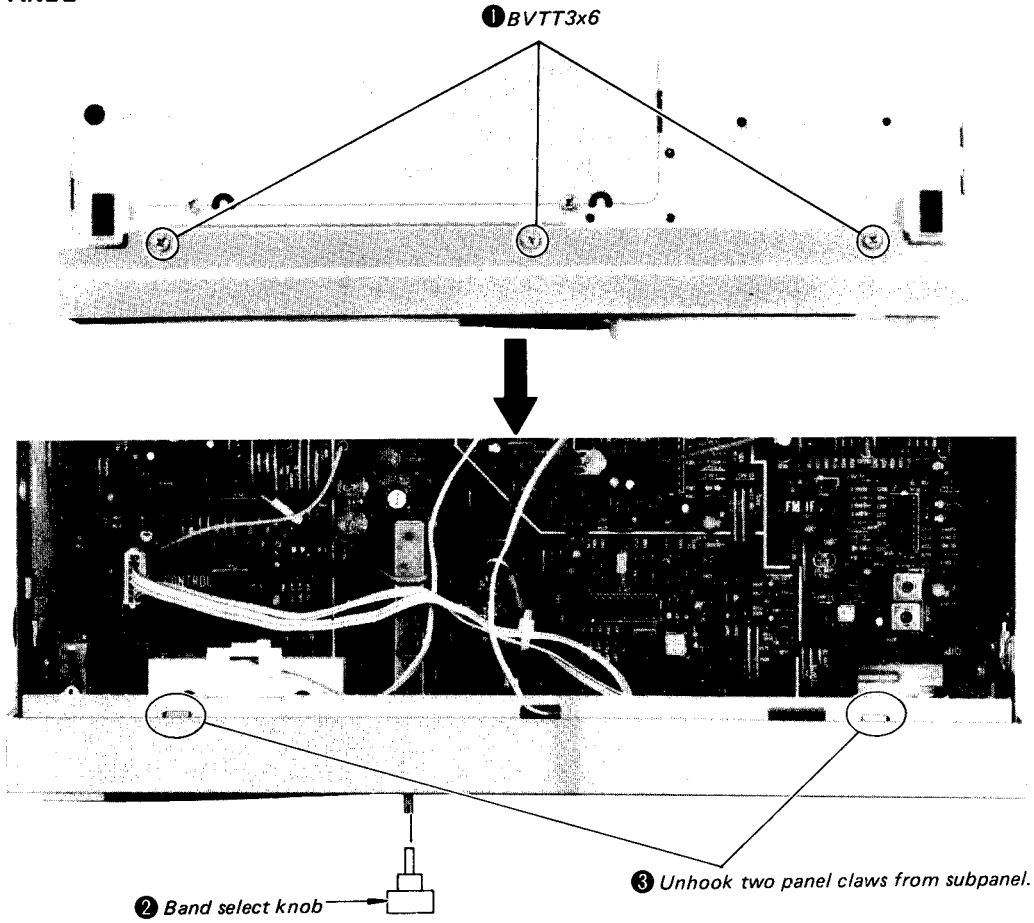
TOP COVER

Remove four (4) M3 top cover screws.

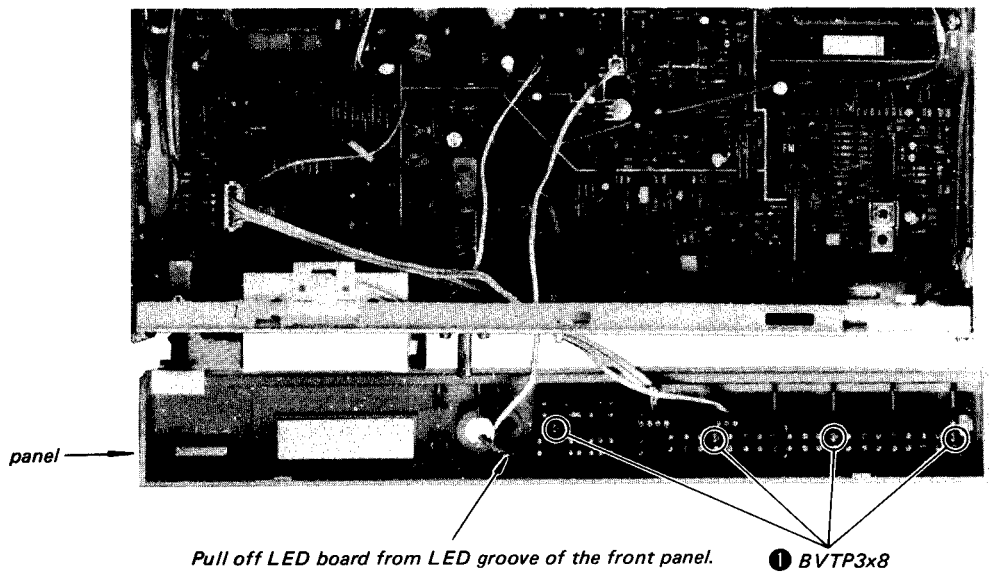
LAMP BOARD



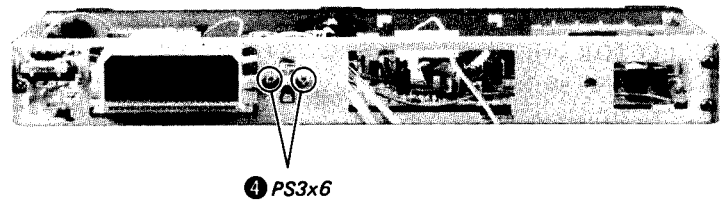
FRONT PANEL



SWITCH BOARD (1)/LED BOARD

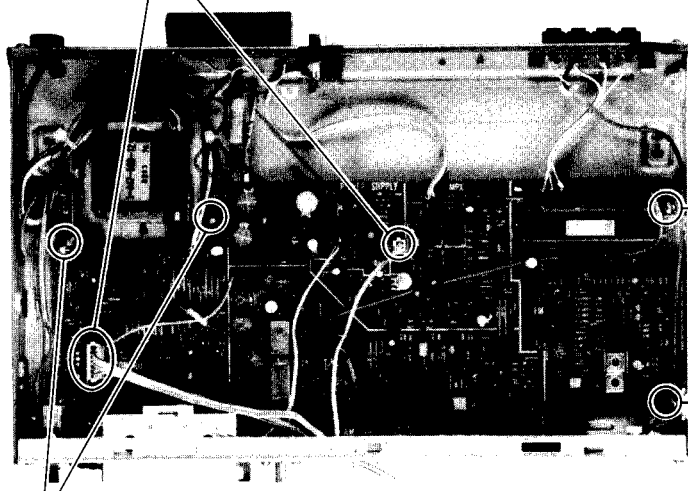


TUNER BOARD



❹ PS3x6

❷ Remove connectors from switch and LED boards. Reroute the wires over the subpanel and re-connect the connectors when desired.

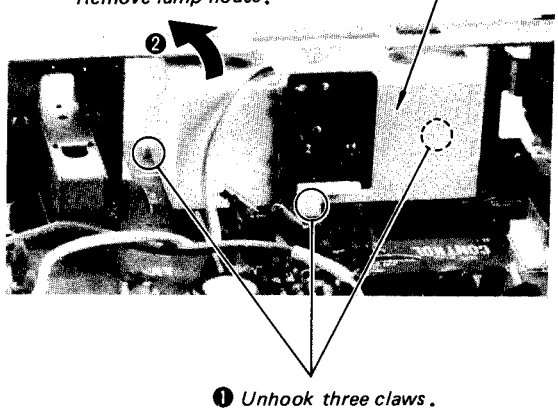


❸ PTTWH3x6

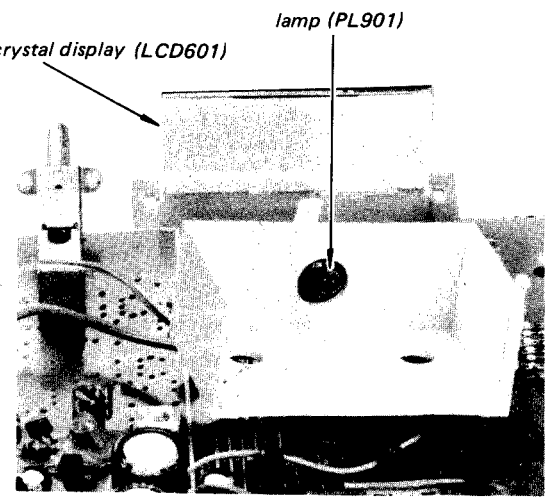
❶ PTTWH3x6

❺ Release tuner board from two board supports.

LIQUID CRYSTAL DISPLAY



❶ Unhook three claws.



SECTION 3
ADJUSTMENTS

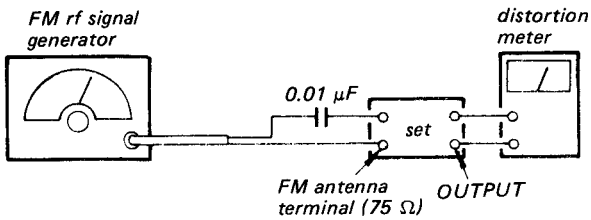
FM SECTION

FM Discriminator Alignment

Setting:

BAND SELECTOR switch . . . . FM
STEREO/MUTING switch . . . . OFF

Procedure:

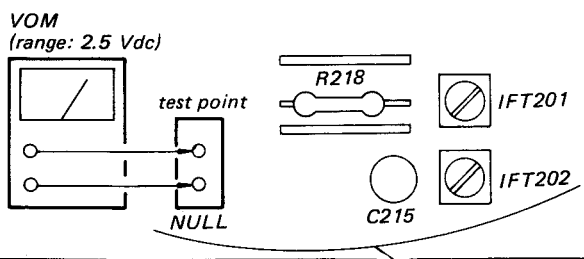


Carrier frequency: 98 MHz
Output level: 1 mV (60 dB)
Modulation: 400 Hz, 40 kHz deviation (100%)

1. Tune the set to 98MHz.
2. Adjust IFT201 for 0 V reading on the VOM. . . . . NULL Adjustment

Note: When the ceramic filter is replaced, these adjustments should be made.

3. Adjust IFT202 for a minimum reading on the distortion meter. . . . . Distortion Adjustment

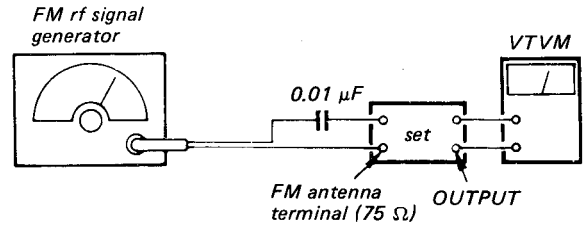


FM Muting Level Adjustment

Setting:

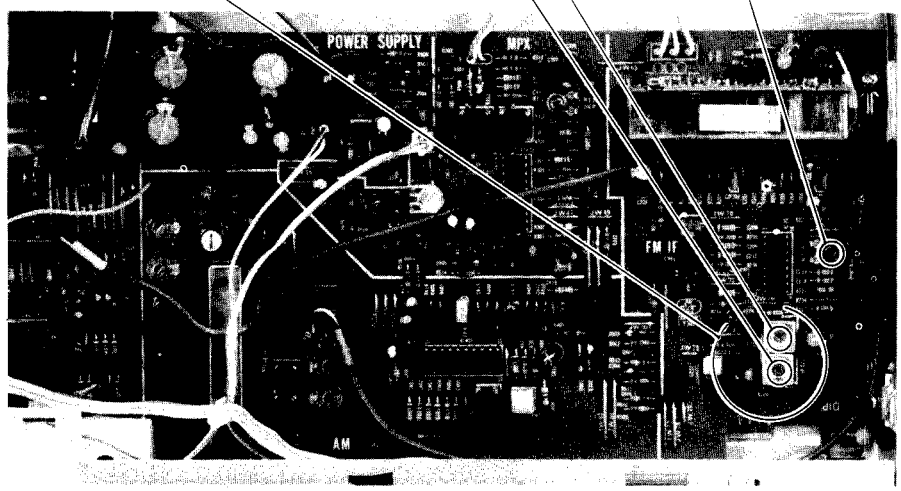
BAND SELECTOR switch . . . . FM
STEREO/MUTING switch . . . . ON

Procedure:



Carrier frequency: 98 MHz
Modulation: 400 Hz, 40 kHz deviation (100%)
Output level: 100 μV (20 dB)

1. Tune the set to 98 MHz.
2. Adjust RT201 for a point the VTVM reading just drops to 0 V.

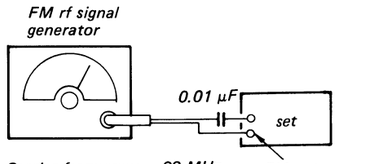


VCO Adjustment

Setting: BAND SELECTOR switch: FM
STEREO/MUTING switch: ON

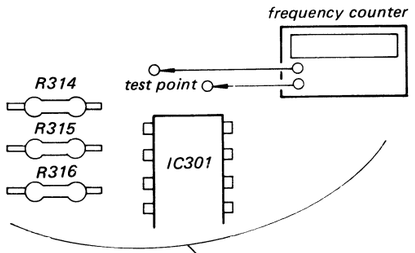
A) Regular Method

Procedure:



Carrier frequency: 98 MHz
Modulation: no modulation
Output level: 1 mV (60 dB)

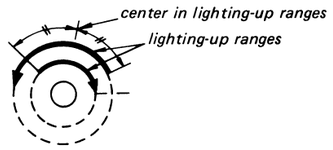
1. Tune the set to 98 MHz.
2. Adjust RT301 for 19 kHz ± 50 Hz on the counter.



B) Simple Method

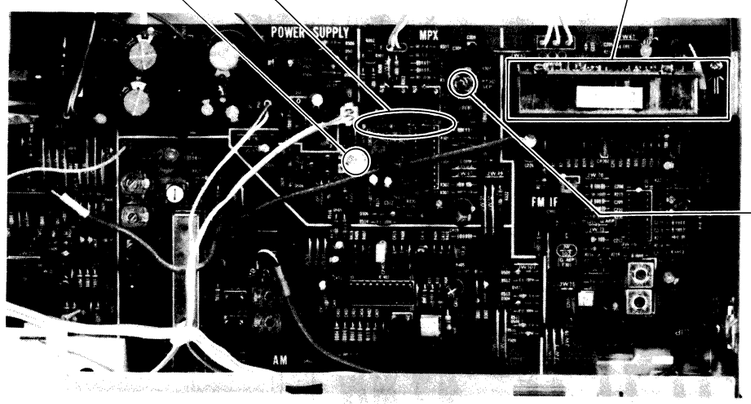
Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RT301 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RT301 at the center of the lighting-up range of both turns as shown below.



RT301

The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement.



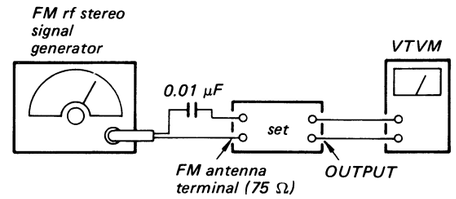
RT302

FM Stereo Separation Adjustment

Setting:

BAND SELECTOR switch . . . . . FM
STEREO/MUTING switch . . . . . ON (STEREO)

Procedure:



Carrier frequency: 98 MHz
Output level: 1 mV (60 dB)
Modulation: Stereo

Audio (1 kHz): 16.25 kHz deviation (45 %)
Pilot (19 kHz): 7.5 kHz deviation (10 %)
Sub-channel (38 kHz) 16.25 kHz deviation (45 %)

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RT302 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RT302 for minimum reading.

L-CH Stereo separation: Ⓐ – Ⓑ
R-CH Stereo separation: Ⓒ – Ⓓ

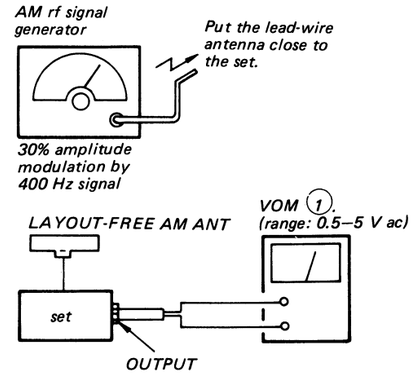
The separations of both channels should be equal.

The separations of both channels should be equal.

MW/LW SECTION

Setting:

BAND SELECTOR switch: MW/LW


AM rf signal generator
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400 Hz signal
LAYOUT-FREE AM ANT
VOM (1). (range: 0.5–5 V ac)
set
OUTPUT

- *Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.*

LW FREQUENCY CO	
reading on VOM (2).	18.5
frequency indication	344
adjustment part	CT

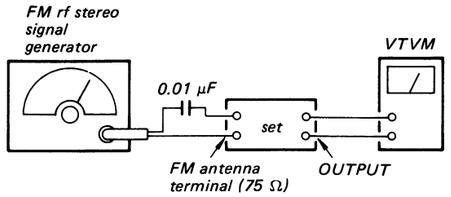
MW FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM (2).	frequency indication	adjustment part
22 ± 0.2 V	1,602 kHz	CT401
1.8 ± 0.1 V	531 kHz	T401

FM Stereo Separation Adjustment

Setting:

BAND SELECTOR switch ..... FM
STEREO/MUTING switch ..... ON (STEREO)

Procedure:



Carrier frequency: 98 MHz
Output level: 1 mV (60 dB)
Modulation: Stereo

Audio (1 kHz): 16.25 kHz deviation (45 %)
Pilot (19 kHz): 7.5 kHz deviation (10 %)
Sub-channel (38 kHz) 16.25 kHz deviation (45 %)

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RT302 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RT302 for minimum reading.

L-CH Stereo separation: Ⓐ – Ⓑ
R-CH Stereo separation: Ⓒ – Ⓓ

The separations of both channels should be equal.

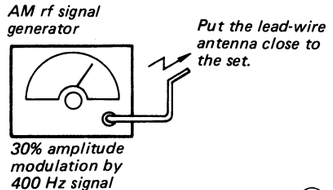
The separations of both channels should be equal.

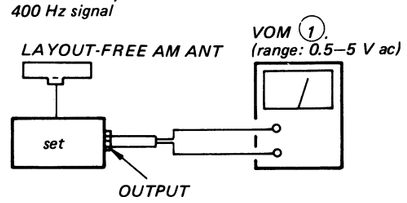
RT302

MW/LW SECTION

Setting:

BAND SELECTOR switch: MW/LW

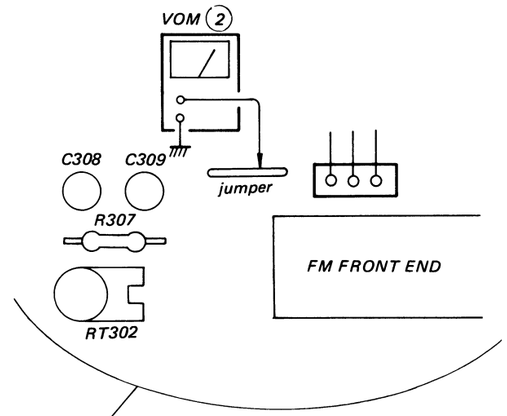




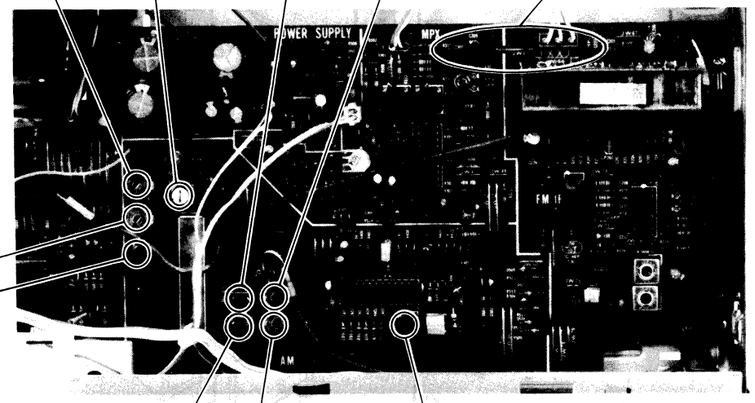
- *Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.*

LW FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM (2).	18.5 ± 0.2 V	2.2 ± 0.1 V
frequency indication	344 kHz	153 kHz
adjustment part	CT407	T406

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM (1).	
170 kHz	310 kHz
T408	CT408



MW FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM (2).	frequency indication	adjustment part
22 ± 0.2 V	1,602 kHz	CT401
1.8 ± 0.1 V	531 kHz	T401



T407	CT404
603 kHz	1404 kHz
Adjust for a maximum reading on VOM (1).	
MW TRACKING ADJUSTMENT	

IFT401	450 kHz
Adjust for a maximum reading on VOM (1).	
AM IF ALIGNMENT	

4-1. MOUNTING DIAGRAM
– Conductor Side –

– Note on Schematic Diagram –

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- : nonflammable resistor.
- △ : internal component.
- ⊹ : selected to yield optimum performance.
- : panel designation.
- : adjustment for repair.
- : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM.
  no mark : FM
  ( ) : AM
- Voltage variations may be noted due to normal production tolerances.

Ref. No.	Switch	Position
S1	BAND	FM
S501	TUNING/–	OFF
S502	TUNING/+	OFF
S503	STEREO/MUTING	OFF
S504	MEMORY	OFF
S505-509	1-5	OFF
S901	POWER	OFF

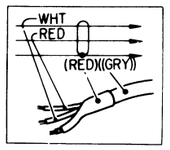
- : Signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

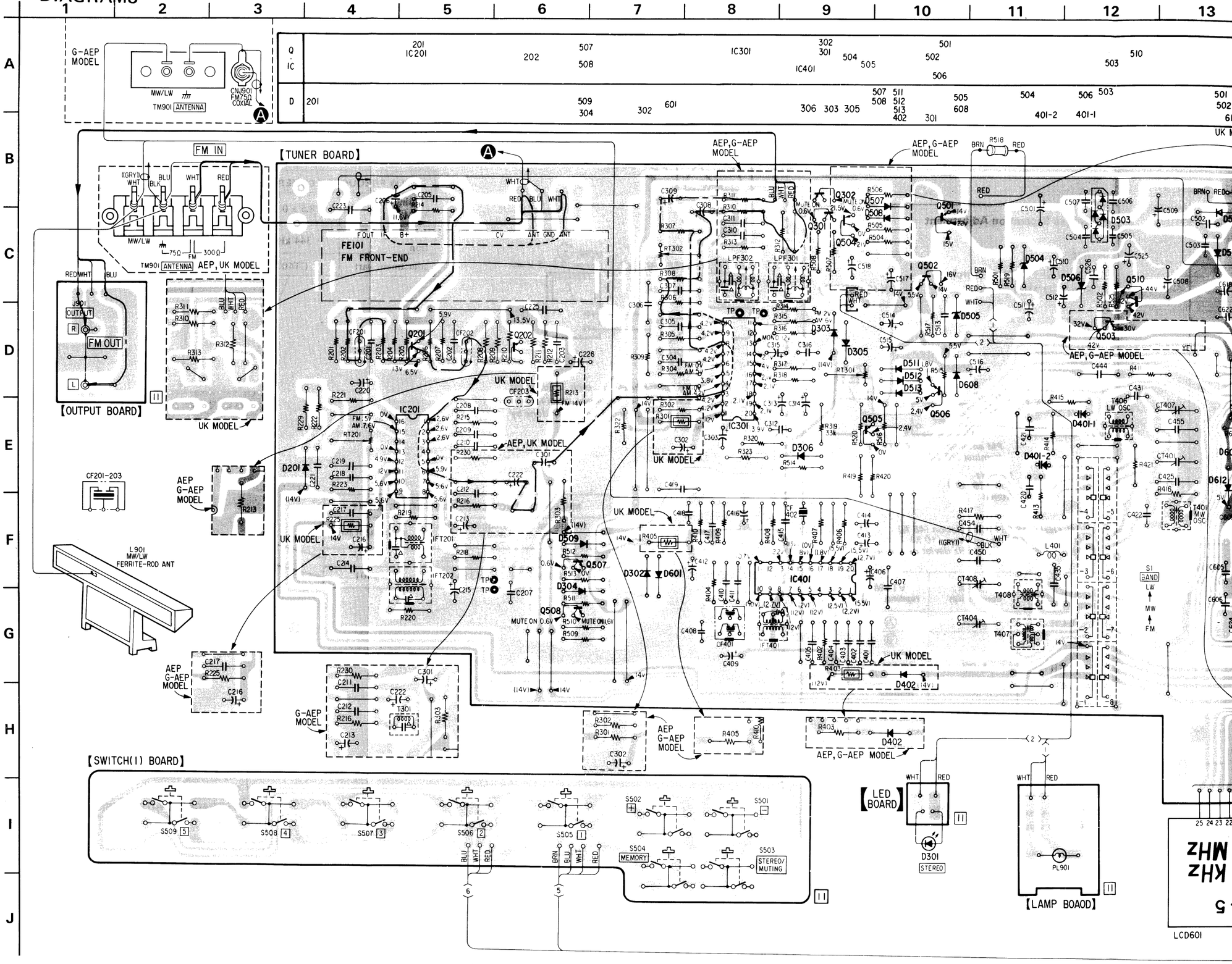
Note: Voltages are measured with a VOM (50kΩ/V).

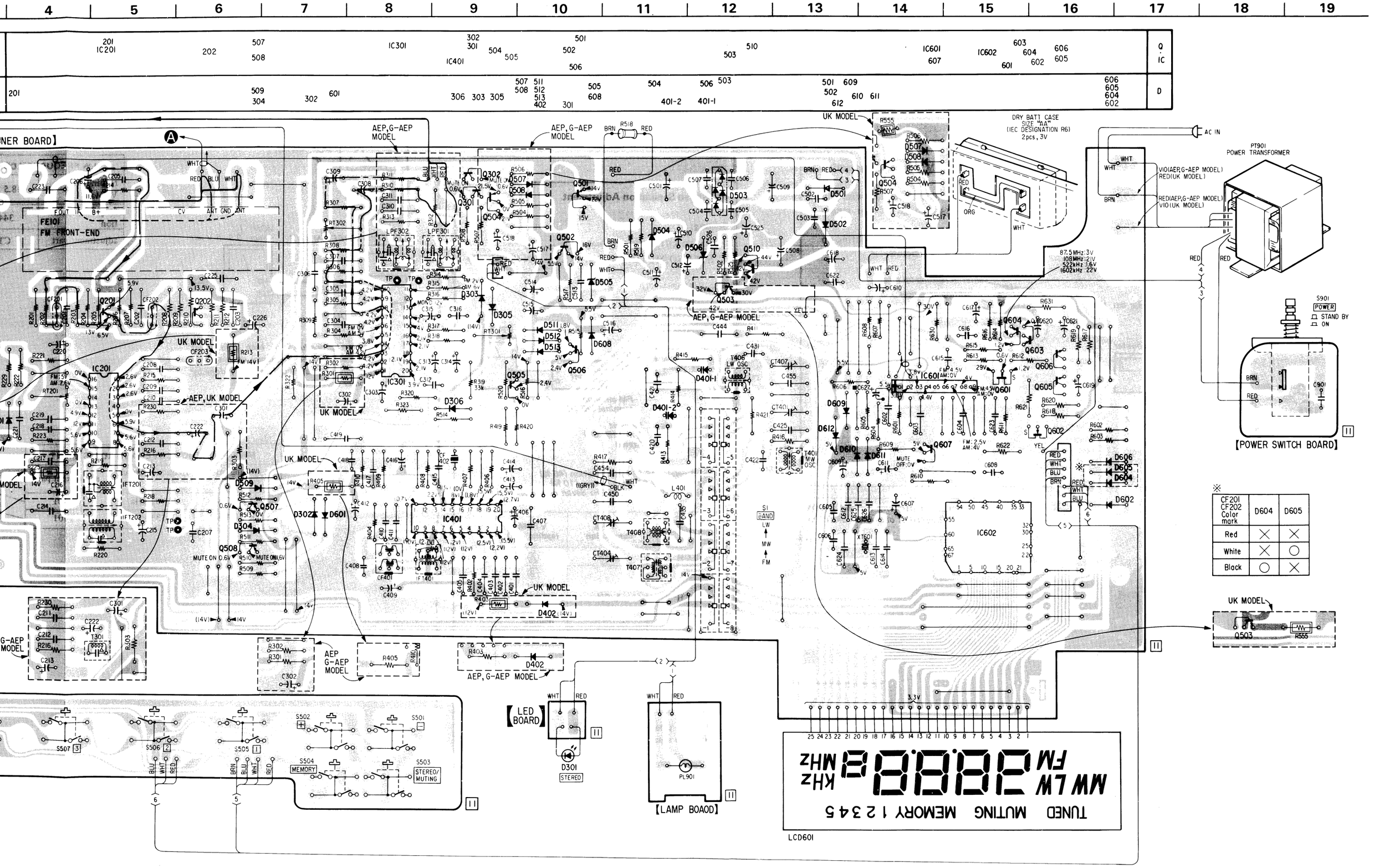
– Note on Mounting Diagram –

- Color code of sleeving over the end of the jacket.



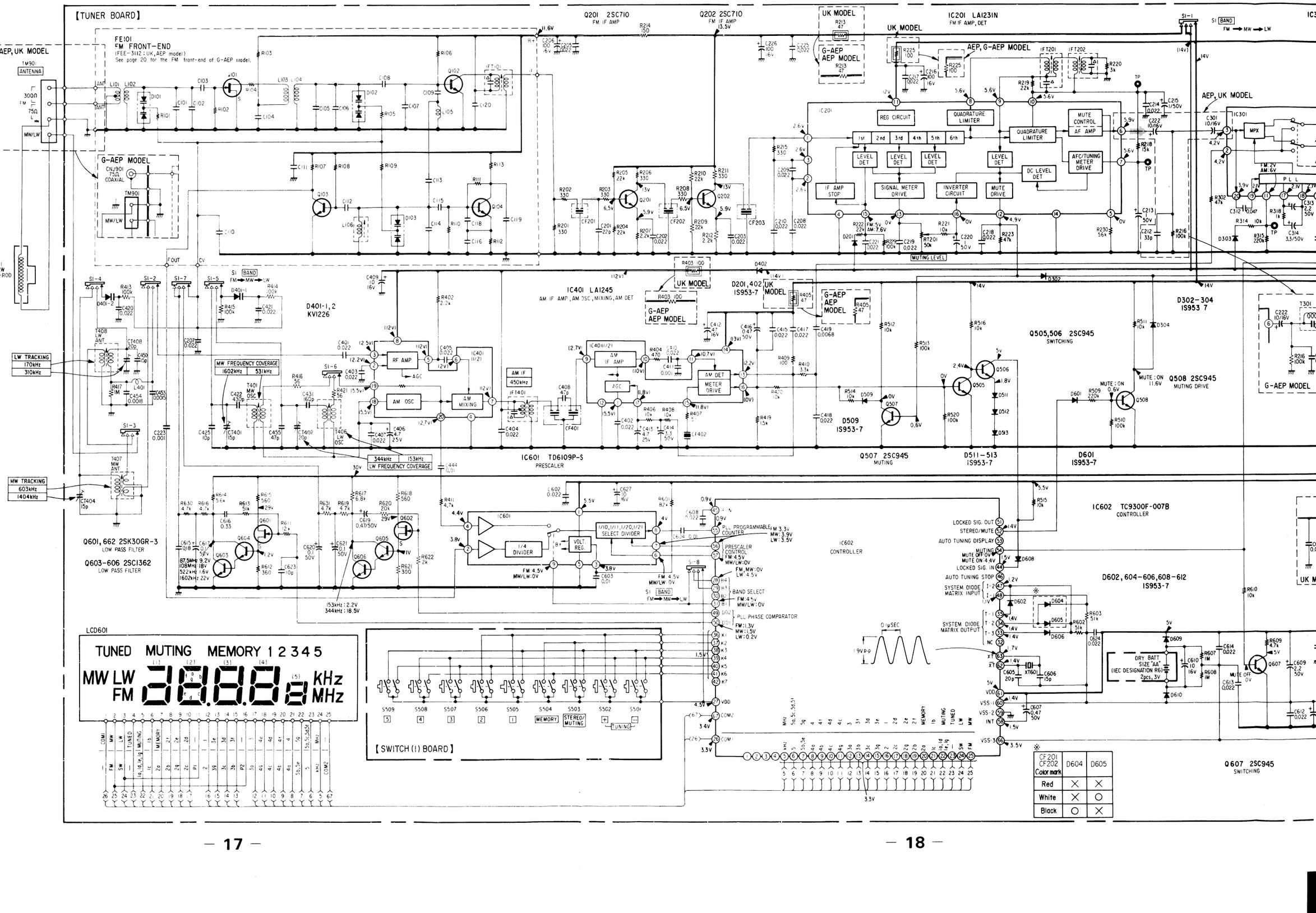
- ○—: parts extracted from the component side.
- ●—: parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- [ ]← : indicates side identified with part number.
- ▒▒ : B+ pattern
- ▬▶▬ : signal path
- ▬▶▬ : L-CH signal path
- ▬▶▬ : R-CH signal path



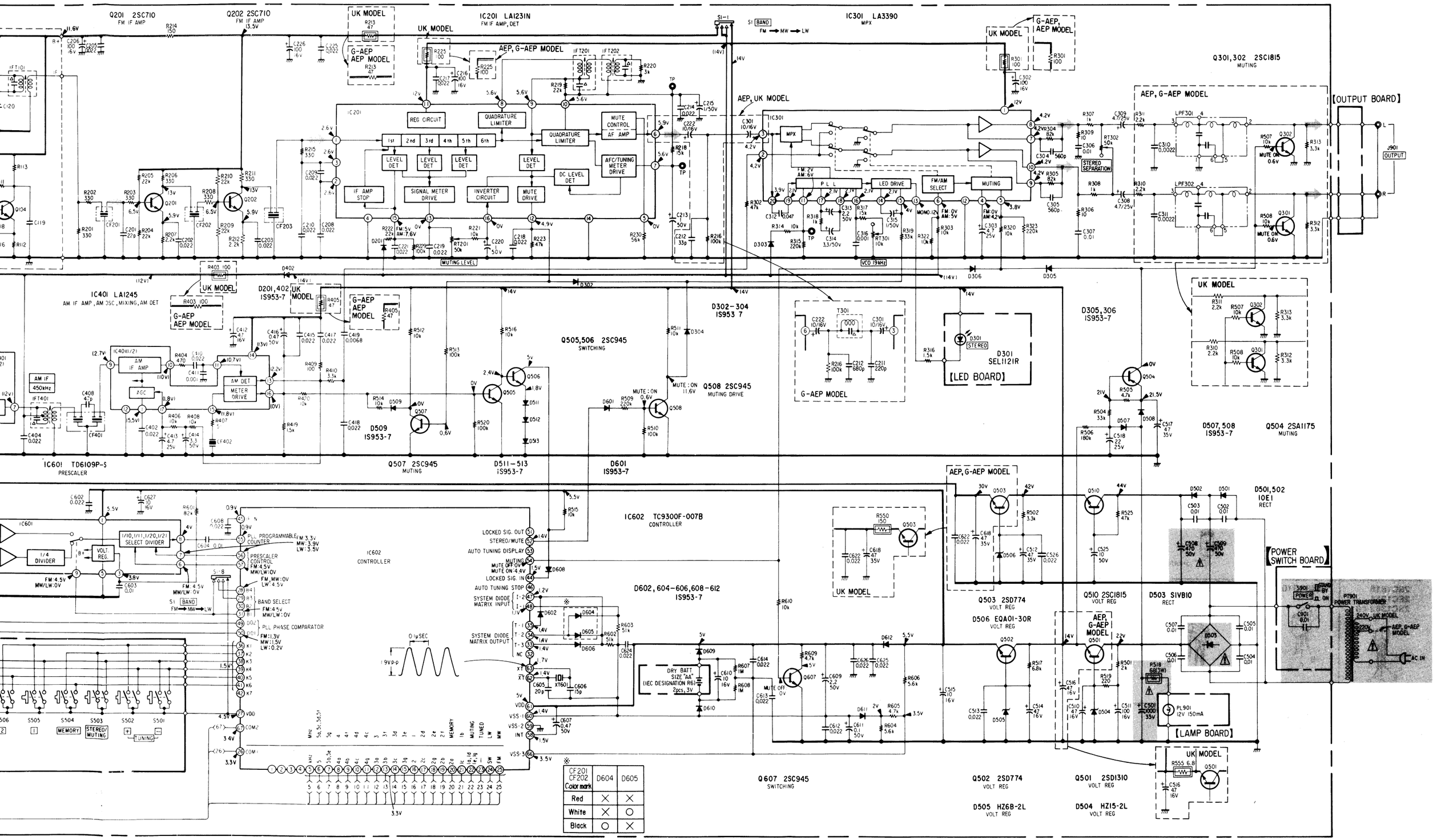

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
IC201 202 507 508 IC301 302 301 504 505 IC401 501 502 506 503 510 IC601 607 IC602 603 604 606 605 601 602
201 509 304 302 601 306 303 305 507 508 511 512 513 402 301 505 608 504 401-2 506 503 401-1 501 609 502 612 610 611 606 605 604 602
Q IC
D
【INNER BOARD】
AEP,G-AEP MODEL
UK MODEL
FE101 FM FRONT-END
IC201
AEP,UK MODEL
IC301
IC401
IC601
IC602
Q201 Q202 Q301 Q302 Q501 Q502 Q503 Q504 Q505 Q506 Q507 Q508 Q510 Q601 Q602 Q603 Q604 Q605 Q606 Q607
D301 D302 D303 D305 D306 D401-1 D401-2 D402 D501 D502 D503 D504 D505 D506 D508 D509 D511 D512 D513 D601 D602 D604 D605 D606 D608 D609 D610 D611 D612
IFT201 IFT202 IFT401
T301 T401 T406
L401
PT901 POWER TRANSFORMER
AC IN
DRY BATT CASE SIZE "AA" (IEC DESIGNATION R6) 2pcs, 3V
87.5MHz:3V 108MHz:2V 522kHz:1.6V 1602kHz:22V
S901 POWER STAND BY ON
【POWER SWITCH BOARD】
※
CF201 CF202 Color mark | D604 | D605
Red | × | ×
White | × | ○
Black | ○ | ×
S501 S502 S503 STEREO/MUTING S504 MEMORY S505 S506 S507
【LED BOARD】
D301 STEREO
【LAMP BOAOD】
PL901
LCD601
TUNED MUTING MEMORY 1 2 3 4 5
MW LW FM kHz MHz
SI BAND LW MW FM

4-2. SCHEMATIC DIAGRAM

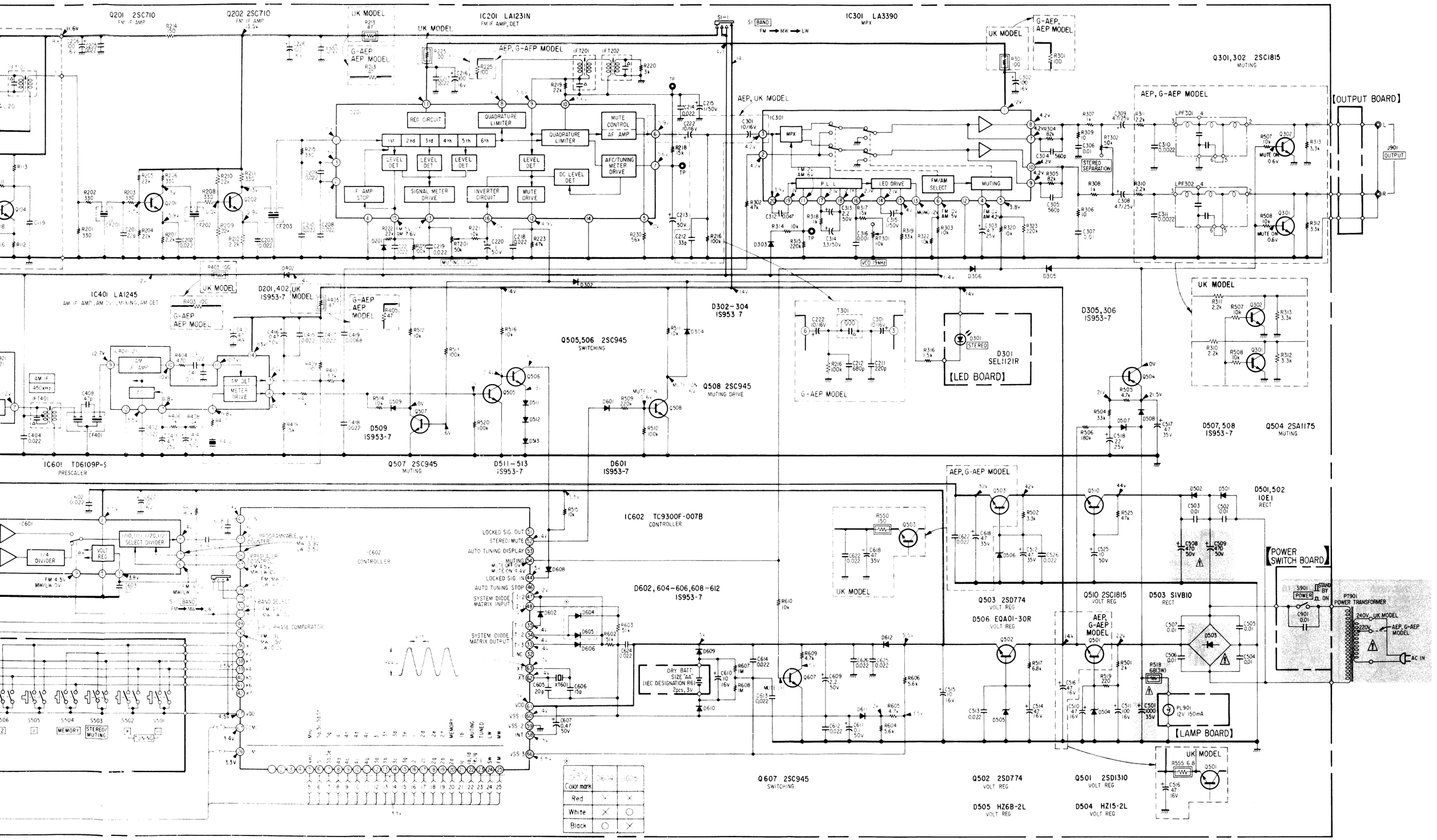
• See page 14 for the semiconductor lead layouts.

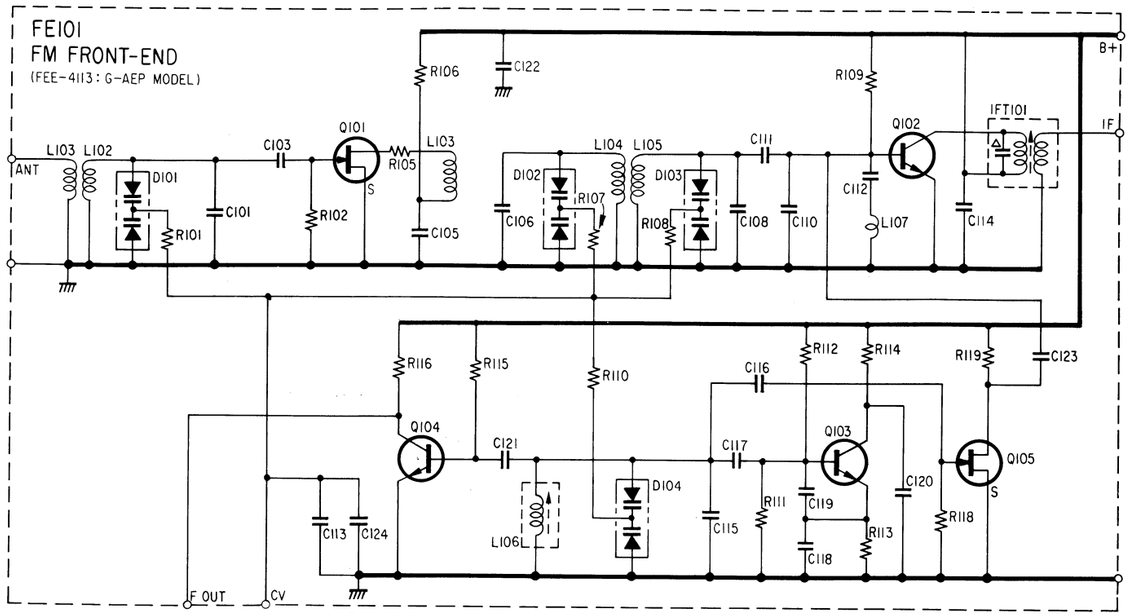


ST-V30L


Q201 2SC710
FM IF AMP
Q202 2SC710
FM IF AMP
IC201 LA1231N
FM IF AMP, DET
IC301 LA3390
MPX
Q301,302 2SC1815
MUTING
IC401 LA1245
AM IF AMP, AM OSC, MIXING, AM DET
IC601 TD6109P-S
PRESCALER
IC602 TC9300F-007B
CONTROLLER
Q505,506 2SC945
SWITCHING
Q507 2SC945
MUTING
Q508 2SC945
MUTING DRIVE
Q504 2SA1175
MUTING
Q607 2SC945
SWITCHING
Q503 2SD774
VOLT REG
Q502 2SD774
VOLT REG
Q501 2SD1310
VOLT REG
D506 EQA01-30R
VOLT REG
D505 HZ6B-2L
VOLT REG
D504 HZ15-2L
VOLT REG
D503 SIVB10
RECT
D501,502
10E1
RECT
D201,402
IS953-7
D302-304
IS953 7
D305,306
IS953-7
D507,508
IS953-7
D509
IS953-7
D511-513
IS953-7
D601
IS953-7
D602,604-606,608-612
IS953-7
D301
SEL1121R
UK MODEL
G-AEP, AEP MODEL
AEP, UK MODEL
AEP, G-AEP MODEL
[OUTPUT BOARD]
[LED BOARD]
[LAMP BOARD]
[POWER SWITCH BOARD]
REG CIRCUIT
QUADRATURE LIMITER
MUTE CONTROL AF AMP
AFC/TUNING METER DRIVE
IF AMP STOP
SIGNAL METER DRIVE
INVERTER CIRCUIT
MUTE DRIVE
DC LEVEL DET
1st 2nd 3rd 4th 5th 6th
LEVEL DET
MUTING LEVEL
VCO 19kHz
P L L
LED DRIVE
FM/AM SELECT
MUTING
STEREO SEPARATION
AM IF 450kHz
AM IF AMP
AM DET METER DRIVE
AGC
1/4 DIVIDER
VOLT. REG.
1/10,1/11,1/20,1/21 SELECT DIVIDER
PRESCALER CONTROL
PLL PROGRAMMABLE COUNTER
BAND SELECT
PLL PHASE COMPARATOR
LOCKED SIG. OUT
STEREO/MUTE
AUTO TUNING DISPLAY
MUTING
LOCKED SIG. IN
AUTO TUNING STOP
SYSTEM DIODE MATRIX INPUT
SYSTEM DIODE MATRIX OUTPUT
DRY BATT. SIZE "AA" (IEC DESIGNATION R6) 2pcs. 3V
MUTE ON 11.6V
MUTE ON 0.6V
MUTE OFF 0V
CF201 CF202 Color mark
Red
White
Black
S1 BAND FM → MW → LW
S501 POWER
PT901 POWER TRANSFORMER
240V UK MODEL
220V AEP, G-AEP MODEL
AC IN
PL901 12V 150mA
S501 STAND BY
ON
S502 TUNING
S503 STEREO/MUTING
S504 MEMORY
S505
S506

ST-V30L

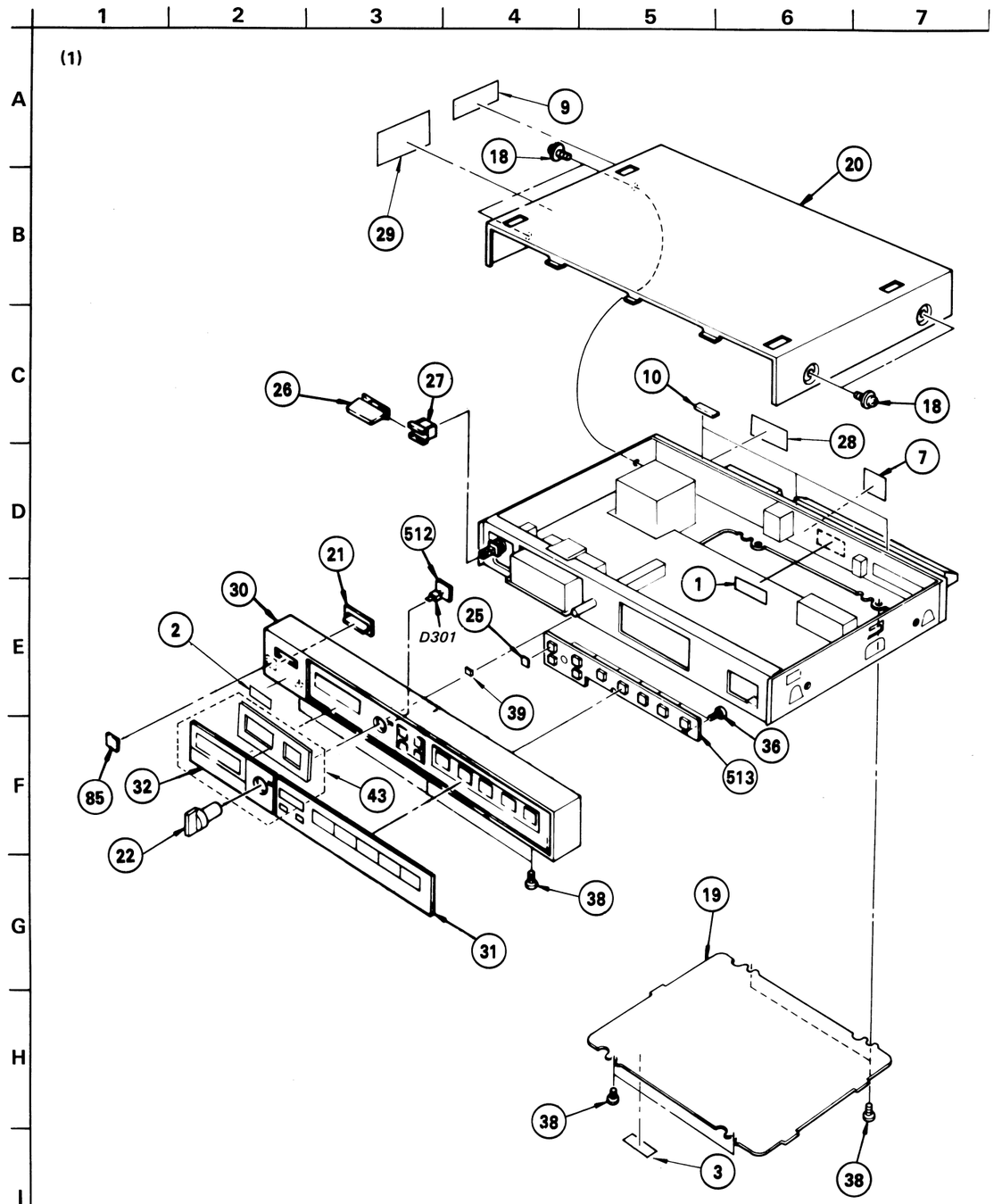

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Q201 2SC710
FM IF AMP
Q202 2SC710
FM IF AMP
IC201 LA1231N
FM IF AMP, DET
IC301 LA3390
MPX
Q301,302 2SC1815
MUTING
[OUTPUT BOARD]
J901
OUTPUT
IC401 LA1245
AM IF AMP, AM OSC, MIXING, AM DET
D201,402 IS953-7
D302-304 IS953 7
Q505,506 2SC945
SWITCHING
Q508 2SC945
MUTING DRIVE
D305,306 IS953-7
Q504 2SA1175
MUTING
D507,508 IS953-7
D501,502 10E1
RECT
IC601 TD6109P-S
PRESCALER
Q507 2SC945
MUTING
D511-513 IS953-7
D601 IS953-7
IC602 TC9300F-007B
CONTROLLER
D602,604-606,608-612 IS953-7
Q607 2SC945
SWITCHING
Q503 2SD774
VOLT REG
D506 EQA01-30R
VOLT REG
Q502 2SD774
VOLT REG
D505 HZ6B-2L
VOLT REG
Q510 2SC1815
VOLT REG
Q501 2SD1310
VOLT REG
D504 HZ15-2L
VOLT REG
D503 SIVB10
RECT
D301 SEL1121R
[LED BOARD]
[POWER SWITCH BOARD]
PT901 POWER TRANSFORMER
[LAMP BOARD]
PL901 12V 150mA
AC IN
UK MODEL
G-AEP AEP MODEL
AEP, G-AEP MODEL
AEP, UK MODEL
Color mark | D604 | D605
Red | × | ×
White | × | ○
Black | ○ | ×

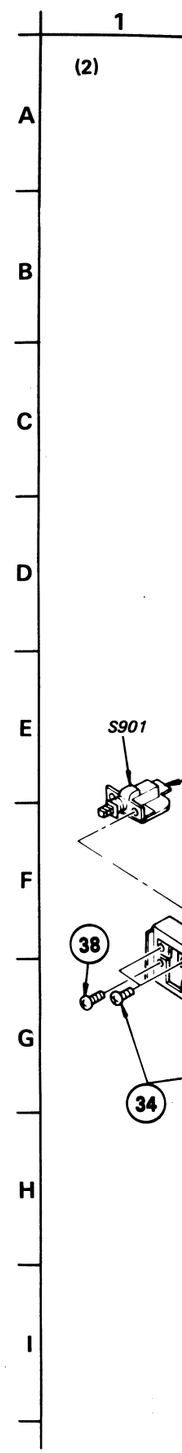


• SEMICONDUCTOR LEAD LAYOUTS

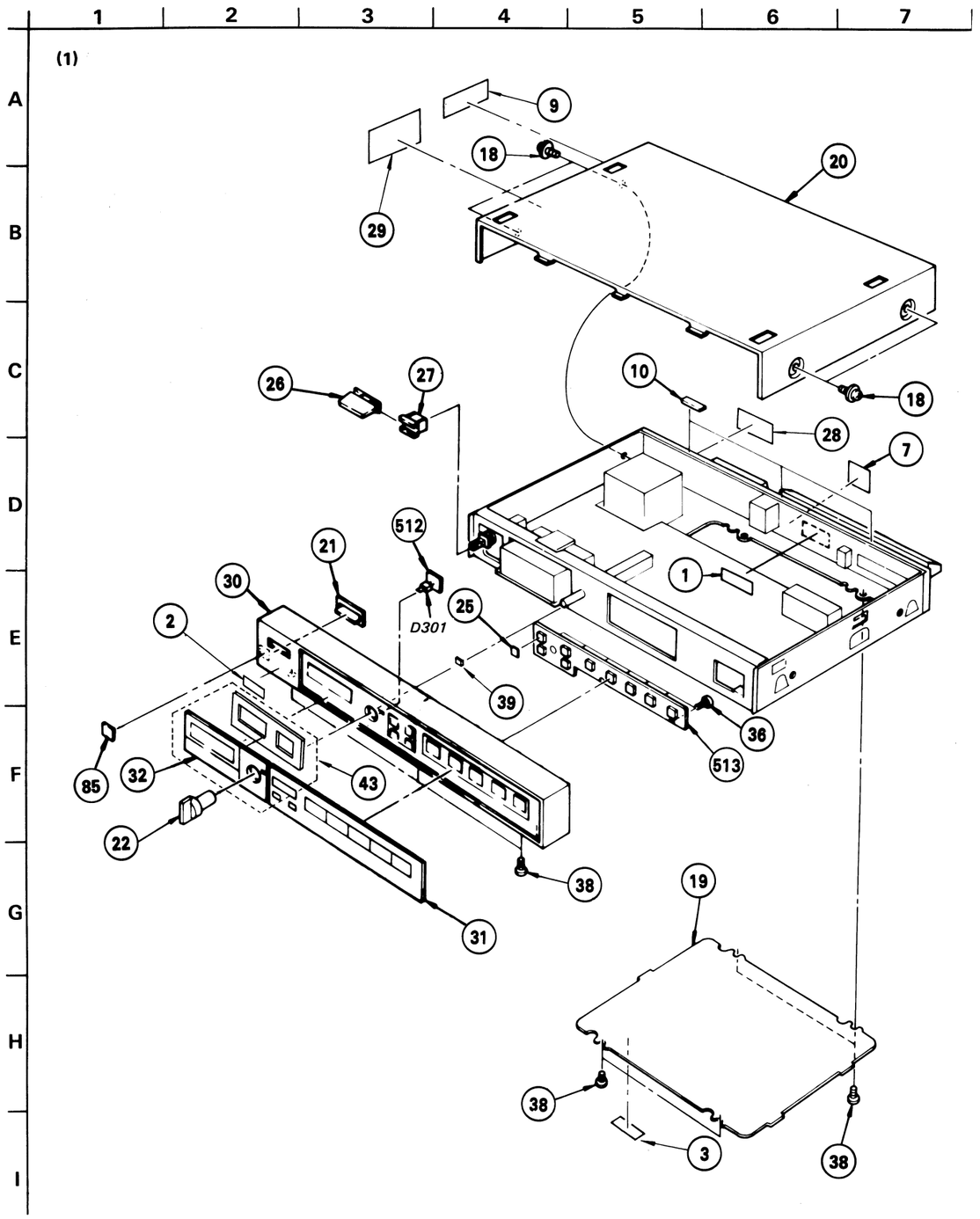
2SA1175 letter side E C B	**2SD774** E C B	**10E1 HZ6B-2L** **10E2 HZ15-2L** **1S1555 EQB01-30** **1S953-7** cathode anode	**SEL1121R** anode cathode	**TC9300F-007B** (Top view)
2SC1815 **2SC1364** **2SC1362-48** E C B	**2SD1310** B C E	**KV1226** letter side cathode 2 anode 2 anode 1 cathode 1	**LA1231N** line or slit or dot 1 2 n n+1 (Top view)	**TD6109P-S** cut or dot 1 2 n
2SC710-13 B C E	**2SK30A-GR3** S G D	**S1VB20**	**LA3390** **LA1245** 1 2 n n+1 (Top view)	

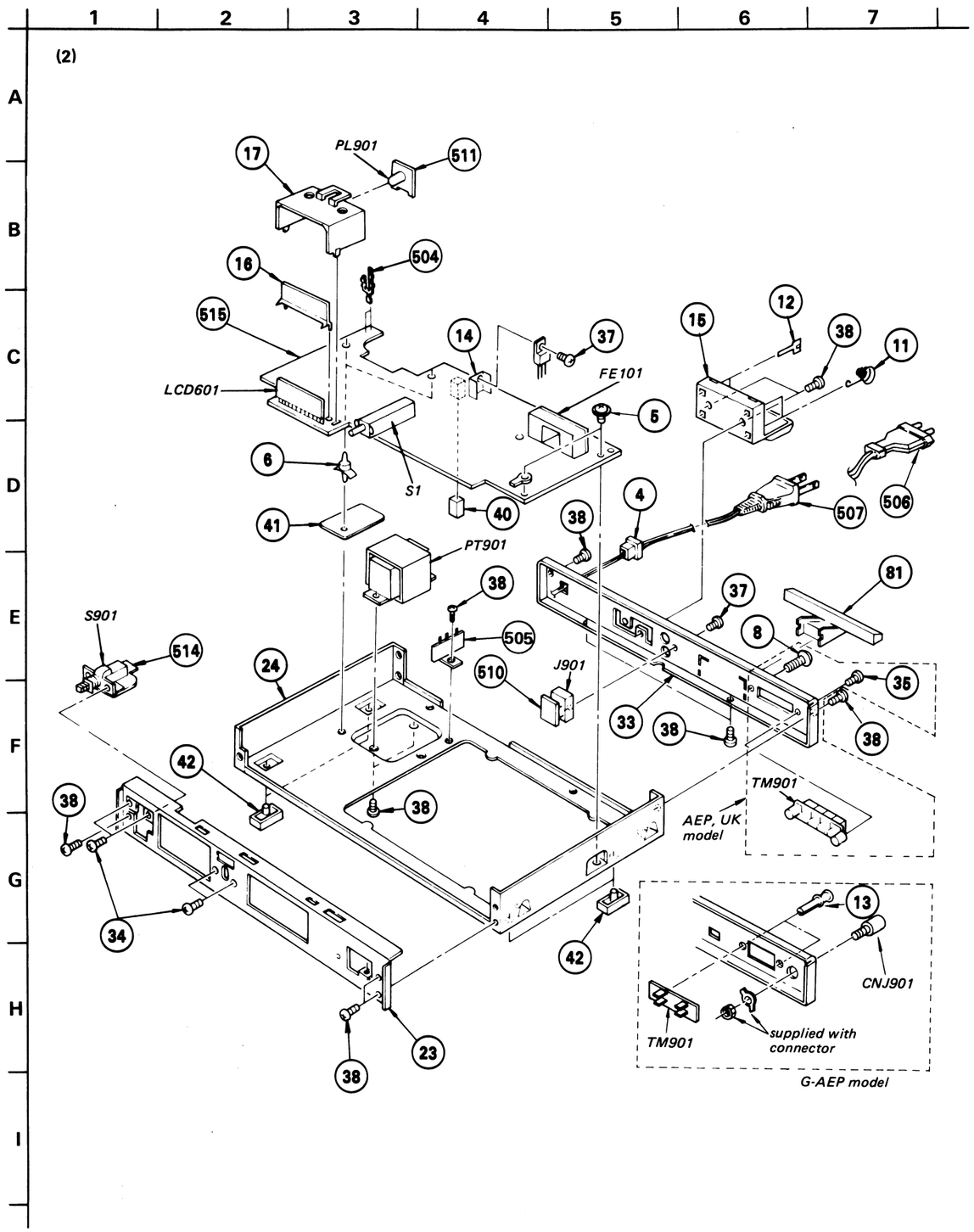
SECTION 5
EXPLODED VIEWS AND PARTS LIST





SECTION 5
EXPLODED VIEWS AND PARTS LIST





GENERAL SECTION

No.	Part No.	Description
1	3-701-030-00	LABEL, SERIAL NUMBER
2 ♦	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)
3	3-703-081-21	(UK)...LABEL (SIDE), SUB CAUTION
4	3-703-244-00	BUSHING, CORD
5	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6
6 ♦	3-703-353-01	SUPPORT, PC BOARD
7	3-703-396-00	(UK)...LABEL, CAUTION
8	3-703-473-00	SCREW, TERMINAL
9 ♦	3-703-845-01	(UK)...LABEL, CAUTION, NEW UL
10	3-831-441-11	CUSHION 23X4X0.5
11	3-883-424-00	SPRING
12	3-883-428-00	PLATE, TERMINAL (POSITIVE)
13	4-812-134-11	(G-AEP)...RIVET, NYLON, 3.5
14 ♦	4-875-327-01	HEAT SINK
15	4-875-530-00	CASE, BATTERY
16	4-884-848-00	ILLUMINATOR (ST)
17 ♦	4-884-856-00	HOUSE, LAMP
18	4-886-821-11	SCREW, M3 TOP COVER
19 ♦	4-886-844-01	PLATE, BOTTOM
20	4-886-845-11	COVER, TOP
21	4-886-976-00	ESCUTCHEON, POWER KNOB
22	4-888-210-00	KNOB, SELECT, BAND
23 ♦	4-888-213-00	PANEL, SUB
24 ♦	4-888-214-01	CHASSIS
25	4-888-232-00	SPACER
26	4-902-830-01	KNOB (POWER-S), T TYPE
27 ♦	4-902-831-01	JOINT (G), KNOB
28	4-903-204-01	(AEP,G-AEP)...LABEL, MODEL NUMBER (AE)
29	4-903-205-01	(UK).....LABEL, MODEL NUMBER (UK)
30	4-903-212-12	PANEL
31	4-903-217-12	SHEET, FUNCTION
32	4-903-218-11	PLATE, INDICATION
33 ♦	4-903-219-01	(G-AEP)....PLATE, JACK
33 ♦	4-903-220-22	(AEP,UK)...PLATE, JACK
34	7-682-647-01	SCREW +PS 3X6
35	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
36	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3
37	7-685-752-04	SCREW +BVTT 3X8 (S)
38	7-685-871-01	SCREW +BVTT 3X6 (S)
39	9-911-839-XX	SPACER, KNOB
40	9-911-842-XX	RETAINER, PC BOARD
41	9-911-863-XX	INSULATOR
42	X-4886-405-1	FOOT ASSY
43	X-4903-206-1	PLATE ASSY, INDICATION

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
81	1-402-082-11	ANTENNA, FERRITE-ROD (LW/MW/SW)(L901)
82	1-501-224-00	(AEP,UK)...ANTENNA, FEEDER
83	1-556-793-21	CORD, CONNECTION
84	3-701-630-00	BAG, POLYETHYLENE
85	3-703-710-01	STICKER, SONY SYMBOL (12)
86	3-773-791-11	(AEP,UK).....MANUAL, INSTRUCTION
87	3-773-791-41	(AEP,G-AEP)...MANUAL, INSTRUCTION
88	4-875-574-00	SHEET, PROTECTION
89	4-886-997-00	CUSHION (RIGHT-E), UPPER
90	4-886-998-00	CUSHION (LEFT-E), UPPER
91	4-903-225-01	INDIVIDUAL CARTON
92	4-903-230-01	CUSHION (LEFT-E), LOWER
93	4-903-231-01	CUSHION (RIGHT-E), LOWER

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	♦;1-508-809-00	BASE POST (14MM) 2P
502	♦;1-535-115-00	TERMINAL
503	♦;1-535-116-00	TERMINAL
504	1-535-416-00	TERMINAL
505	1-536-430-00	L-TYPE TERMINAL STRIP
506	⚠1-551-427-11	(AEP,G-AEP)...CORD, POWER, EURO PLUG
507	⚠1-556-560-00	(UK).....CORD, POWER
508	♦;1-560-060-00	PIN, CONNECTOR 2P
509	♦;1-560-338-00	PIN, CONNECTOR 7P
510	♦;1-612-129-11	(AEP,G-AEP)...PC BOARD, OUTPUT
510	♦;1-612-225-11	(UK).....PC BOARD, OUTPUT
511	♦;1-612-130-11	(AEP,G-AEP)...PC BOARD, LAMP
511	♦;1-612-226-11	(UK).....PC BOARD, LAMP
512	♦;1-612-131-11	(AEP,G-AEP)...PC BOARD, LED
512	♦;1-612-227-11	(UK).....PC BOARD, LED
513	♦;1-612-132-11	(AEP,G-AEP)...PC BOARD, S-1
513	♦;1-612-228-11	(UK).....PC BOARD, S-1
514	♦;1-612-133-11	(AEP,G-AEP)...PC BOARD, POWER SW
514	♦;1-612-229-11	(UK).....PC BOARD, POWER SW
515	♦;A-4351-386-A	(AEP).....MOUNTED PCB, TUNER
515	♦;A-4351-387-A	(G-AEP)...MOUNTED PCB, TUNER
515	♦;A-4351-388-A	(UK).....MOUNTED PCB, TUNER
C201	1-161-263-00	CERAMIC 22PF 5% 50V
C202	1-161-494-00	CERAMIC 0.022MF 30% 25V
C203	1-161-494-00	CERAMIC 0.022MF 30% 25V
C205	1-161-494-00	CERAMIC 0.022MF 30% 25V
C206	1-123-320-00	ELECT 100MF 20% 16V
C207	1-101-005-00	CERAMIC 0.022MF 50V
C208	1-161-494-00	CERAMIC 0.022MF 30% 25V
C209	1-161-494-00	CERAMIC 0.022MF 30% 25V
C210	1-161-494-00	CERAMIC 0.022MF 30% 25V
C211	1-161-315-00	(G-AEP)....CERAMIC 220PF 10% 50V
C212	1-161-265-00	(AEP,UK)...CERAMIC 33PF 5% 50V
C212	1-161-321-00	(G-AEP)....CERAMIC 680PF 10% 50V
C213	1-123-380-00	ELECT 1MF 20% 50V
C214	1-161-494-00	CERAMIC 0.022MF 30% 25V
C215	1-123-380-00	ELECT 1MF 20% 50V
C216	1-123-320-00	ELECT 100MF 20% 16V
C217	1-161-494-00	CERAMIC 0.022MF 30% 25V
C218	1-161-494-00	CERAMIC 0.022MF 30% 25V
C219	1-161-494-00	CERAMIC 0.022MF 30% 25V
C220	1-123-380-00	ELECT 1MF 20% 50V
C221	1-161-494-00	CERAMIC 0.022MF 30% 25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C222	1-123-356-00	ELECT 10MF 20% 16V
C223	1-161-323-00	CERAMIC 0.001MF 10% 50V
C225	1-161-494-00	CERAMIC 0.022MF 30% 25V
C226	1-123-320-00	ELECT 100MF 20% 16V
C301	1-123-356-00	ELECT 10MF 20% 16V
C302	1-123-320-00	ELECT 100MF 20% 16V
C303	1-123-328-00	ELECT 4.7MF 20% 25V
C304	1-161-320-00	CERAMIC 560PF 10% 50V
C305	1-161-320-00	CERAMIC 560PF 10% 50V
C306	1-161-330-00	CERAMIC 0.01MF 30% 25V
C307	1-161-330-00	CERAMIC 0.01MF 30% 25V
C308	1-123-328-00	ELECT 4.7MF 20% 25V
C309	1-123-328-00	ELECT 4.7MF 20% 25V
C310	1-161-326-00	(AEP,G-AEP)...CERAMIC 0.0022MF 30% 50V
C311	1-161-326-00	(AEP,G-AEP)...CERAMIC 0.0022MF 30% 50V
C312	1-101-006-00	CERAMIC 0.047MF 50V
C313	1-123-381-00	ELECT 2.2MF 20% 50V
C314	1-123-382-00	ELECT 3.3MF 20% 50V
C315	1-123-380-00	ELECT 1MF 20% 50V
C316	1-104-077-00	POLYSTYRENE 0.001MF 5% 50V
C401	1-161-494-00	CERAMIC 0.022MF 30% 25V
C402	1-161-494-00	CERAMIC 0.022MF 30% 25V
C403	1-161-494-00	CERAMIC 0.022MF 30% 25V
C404	1-161-494-00	CERAMIC 0.022MF 30% 25V
C405	1-161-494-00	CERAMIC 0.022MF 30% 25V
C406	1-123-328-00	ELECT 4.7MF 20% 25V
C407	1-161-494-00	CERAMIC 0.022MF 30% 25V
C408	1-161-267-00	CERAMIC 47PF 5% 50V
C409	1-123-356-00	ELECT 10MF 20% 16V
C410	1-161-494-00	CERAMIC 0.022MF 30% 25V
C411	1-161-323-00	CERAMIC 0.001MF 10% 50V
C412	1-123-319-00	ELECT 47MF 20% 16V
C413	1-123-328-00	ELECT 4.7MF 20% 25V
C414	1-123-382-00	ELECT 3.3MF 20% 50V
C415	1-161-494-00	CERAMIC 0.022MF 30% 25V
C416	1-123-379-00	ELECT 0.47MF 20% 50V
C417	1-161-494-00	CERAMIC 0.022MF 30% 25V
C418	1-101-005-00	CERAMIC 0.022MF 50V
C419	1-161-329-00	CERAMIC 0.0068MF 30% 25V
C420	1-101-005-00	CERAMIC 0.022MF 50V
C421	1-101-005-00	CERAMIC 0.022MF 50V
C422	1-103-716-00	POLYSTYRENE 430PF 5% 50V
C425	1-161-301-00	CERAMIC 10PF 5% 50V
C431	1-103-706-00	POLYSTYRENE 160PF 5% 50V
C444	1-161-330-00	CERAMIC 0.01MF 30% 25V

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- All resistors are in ohms.
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In each case, U : μ, for example:
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UPD···: μPD···

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C450	1-102-951-00	CERAMIC	15PF	5%	50V
C453	1-161-053-00	CERAMIC	0.0015MF	30%	50V
C454	1-102-120-00	CERAMIC	0.0018MF	10%	50V
C455	1-161-267-00	CERAMIC	47PF	5%	50V
C501 ⚠	1-123-349-00	ELECT	1000MF	20%	35V
C502	1-101-004-00	CERAMIC	0.01MF		50V
C503	1-101-004-00	CERAMIC	0.01MF		50V
C504	1-101-004-00	CERAMIC	0.01MF		50V
C505	1-101-004-00	CERAMIC	0.01MF		50V
C506	1-101-004-00	CERAMIC	0.01MF		50V
C507	1-101-004-00	CERAMIC	0.01MF		50V
C508 ⚠	1-123-363-00	ELECT	470MF	20%	50V
C509 ⚠	1-123-363-00	ELECT	470MF	20%	50V
C510	1-123-319-00	ELECT	47MF	20%	16V
C511	1-123-320-00	ELECT	100MF	20%	16V
C512	1-123-359-00	ELECT	47MF	20%	35V
C513	1-161-494-00	CERAMIC	0.022MF	30%	25V
C514	1-123-319-00	ELECT	47MF	20%	16V
C515	1-123-356-00	ELECT	10MF	20%	16V
C516	1-123-319-00	ELECT	47MF	20%	16V
C517	1-123-359-00	ELECT	47MF	20%	35V
C518	1-123-330-00	ELECT	22MF	20%	25V
C525	1-123-356-00	ELECT	10MF	20%	50V
C526	1-101-005-00	CERAMIC	0.022MF		50V
C602	1-161-494-00	CERAMIC	0.022MF	30%	25V
C603	1-161-330-00	CERAMIC	0.01MF	30%	25V
C604	1-161-330-00	CERAMIC	0.01MF	30%	25V
C605	1-101-974-00	CERAMIC	20PF	5%	50V
C606	1-102-851-00	CERAMIC	15PF	5%	50V
C607	1-123-379-00	ELECT	0.47MF	20%	50V
C608	1-101-005-00	CERAMIC	0.022MF		50V
C609	1-123-381-00	ELECT	2.2MF	20%	50V
C610	1-123-356-00	ELECT	10MF	20%	16V
C611	1-123-607-00	ELECT	0.1MF	20%	50V
C612	1-161-494-00	CERAMIC	0.022MF	30%	25V
C613	1-161-494-00	CERAMIC	0.022MF	30%	25V
C614	1-161-494-00	CERAMIC	0.022MF	30%	25V
C615	1-130-635-00	FILM	0.18MF	5%	50V
C616	1-130-638-00	FILM	0.33MF	5%	50V
C617	1-123-607-00	ELECT	0.1MF	20%	50V
C618	1-123-359-00	ELECT	47MF	20%	35V
C619	1-123-379-00	ELECT	0.47MF	20%	50V
C620	1-123-607-00	ELECT	0.1MF	20%	50V
C621	1-123-607-00	ELECT	0.1MF	20%	50V
C622	1-101-005-00	CERAMIC	0.022MF		50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C623	1-161-259-00	CERAMIC	10PF	5%	50V
C624	1-161-494-00	CERAMIC	0.022MF	30%	25V
C625	1-161-494-00	CERAMIC	0.022MF	30%	25V
C626	1-161-494-00	CERAMIC	0.022MF	30%	25V
C627	1-123-356-00	ELECT	10MF	20%	16V
C901 ⚠	1-101-004-00	CERAMIC	0.01MF		50V
CF201	1-527-968-00	FILTER, CERAMIC			
CF202	1-527-968-00	FILTER, CERAMIC			
CF203	1-527-968-00	FILTER, CERAMIC			
CF401	1-527-937-00	FILTER, CERAMIC			
CF402	1-527-981-00	FILTER, CERAMIC			
CNJ901	1-561-919-00	(G-AEP)....SOCKET, CONNECTOR			
CT401	1-141-180-00	CAP, TRIMMER 15P			
CT404	1-141-180-00	CAP, TRIMMER 15P			
CT407	1-141-171-00	CAP, TRIMMER 20P			
CT408	1-141-171-00	CAP, TRIMMER 20P			
D201	8-719-815-55	DIODE 1S1555			
D301	8-719-311-21	DIODE SEL1121R			
D302	8-719-815-55	DIODE 1S1555			
D303	8-719-815-55	DIODE 1S1555			
D304	8-719-815-55	DIODE 1S1555			
D305	8-719-815-55	DIODE 1S1555			
D306	8-719-815-55	DIODE 1S1555			
D401	8-719-912-27	DIODE KV1226			
D402	8-719-815-55	DIODE 1S1555			
D501	8-719-200-02	DIODE 10E-2			
D502	8-719-200-02	DIODE 10E-2			
D503 ⚠	8-719-511-20	DIODE S1V820			
D504	8-719-910-52	DIODE HZ15-2Z			
D505	8-719-910-65	DIODE HZ6B2L			
D506	8-719-931-30	DIODE EQB01-30			
D507	8-719-815-55	DIODE 1S1555			
D508	8-719-815-55	DIODE 1S1555			
D509	8-719-815-55	DIODE 1S1555			
D511	8-719-815-55	DIODE 1S1555			
D512	8-719-815-55	DIODE 1S1555			
D513	8-719-815-55	DIODE 1S1555			
D601	8-719-815-55	DIODE 1S1555			
D602	8-719-815-55	DIODE 1S1555			
D604	8-719-815-55	DIODE 1S1555			
D605	8-719-815-55	DIODE 1S1555			
D606	8-719-815-55	DIODE 1S1555			
D608	8-719-815-55	DIODE 1S1555			
D609	8-719-815-55	DIODE 1S1555			
D610	8-719-815-55	DIODE 1S1555			
D611	8-719-815-55	DIODE 1S1555			
D612	8-719-815-55	DIODE 1S1555			

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- All resistors are in ohms.
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SEMICONDUCTORS

In each case, U : μ, for example:
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ELECTRICAL PARTS

Ref.No.	Part No.	Description
FE101	A-4344-039-A	(AEP,UK)....FRONT END, FM (FEE-3112)
FE101	A-4344-043-A	(G-AEP).....FRONT END, FM (FEE-4113)
IC201	8-759-812-31	IC LA1231N
IC301	8-759-833-90	IC LA3390
IC401	8-759-812-45	IC LA1245
IC601	8-759-202-10	IC TD6109P-S
IC602	8-759-202-09	IC TC9300F-007B
IFT201	1-404-400-00	TRANSFORMER, DISCRIMINATOR
IFT202	1-404-401-00	TRANSFORMER, DISCRIMINATOR
IFT401	1-404-413-00	TRANSFORMER, IF
J901	1-507-913-11	JACK, PIN 2P
L401	1-407-173-XX	MICRO INDUCTOR 220UH
L901	1-402-082-11	ANTENNA, FERRITE-ROD(LW/MW/SW)
LCD601	1-806-643-00	DISPLAY PANEL, LIQUID CRYSTAL
LPF301	1-235-164-00	(AEP,G-AEP)....FILTER, LOW PASS
LPF302	1-235-164-00	(AEP,G-AEP)....FILTER, LOW PASS
PL901	1-518-557-11	LAMP, PILOT 12V 150MA
PT901⚠	1-447-560-00	TRANSFORMER, POWER
Q201	8-729-671-13	TRANSISTOR 2SC710-13
Q202	8-729-671-13	TRANSISTOR 2SC710-13
Q301	8-729-663-47	TRANSISTOR 2SC1364
Q302	8-729-663-47	TRANSISTOR 2SC1364
Q501	8-729-103-32	TRANSISTOR 2SD1310
Q502	8-729-177-43	TRANSISTOR 2SD774
Q503	8-729-177-43	TRANSISTOR 2SD774
Q504	8-729-117-54	TRANSISTOR 2SA1175
Q505	8-729-663-47	TRANSISTOR 2SC1364
Q506	8-729-663-47	TRANSISTOR 2SC1364
Q507	8-729-663-47	TRANSISTOR 2SC1364
Q508	8-729-663-47	TRANSISTOR 2SC1364
Q510	8-729-663-47	TRANSISTOR 2SC1364
Q601	8-729-203-05	TRANSISTOR 2SK30A-GR3
Q602	8-729-203-05	TRANSISTOR 2SK30A-GR3
Q603	8-729-664-47	TRANSISTOR 2SC1362-48
Q604	8-729-664-47	TRANSISTOR 2SC1362-48
Q605	8-729-664-47	TRANSISTOR 2SC1362-48
Q606	8-729-664-47	TRANSISTOR 2SC1362-48
Q607	8-729-663-47	TRANSISTOR 2SC1364
R201	1-247-119-00	CARBON 330 5% 1/4W
R202	1-247-119-00	CARBON 330 5% 1/4W
R203	1-247-119-00	CARBON 330 5% 1/4W
R204	1-246-505-00	CARBON 22K 5% 1/4W
R205	1-246-505-00	CARBON 22K 5% 1/4W
R206	1-247-119-00	CARBON 330 5% 1/4W

ELECTRICAL PARTS

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R207	1-247-139-00	CARBON 2.2K 5% 1/4W
R208	1-247-119-00	CARBON 330 5% 1/4W
R209	1-246-505-00	CARBON 22K 5% 1/4W
R210	1-246-505-00	CARBON 22K 5% 1/4W
R211	1-247-119-00	CARBON 330 5% 1/4W
R212	1-247-139-00	CARBON 2.2K 5% 1/4W
R213	1-247-099-00	(AEP,G-AEP)...CARBON 47 5% 1/4W
R213	1-247-099-00	(UK).....CARBON 47 5% 1/4W F
R214	1-247-111-00	CARBON 150 5% 1/4W
R215	1-247-119-00	CARBON 330 5% 1/4W
R216	1-247-179-00	CARBON 100K 5% 1/4W
R218	1-247-159-00	CARBON 15K 5% 1/4W
R219	1-246-505-00	CARBON 22K 5% 1/4W
R220	1-246-484-00	CARBON 3K 5% 1/4W
R221	1-247-155-00	CARBON 10K 5% 1/4W
R222	1-246-505-00	CARBON 22K 5% 1/4W
R223	1-247-171-00	CARBON 47K 5% 1/4W
R225	1-247-107-00	(AEP,G-AEP)...CARBON 100 5% 1/4W
R225	1-247-107-00	(UK).....CARBON 100 5% 1/4W F
R229	1-247-179-00	CARBON 100K 5% 1/4W
R230	1-247-173-00	CARBON 56K 5% 1/4W
R301	1-247-107-00	(AEP,G-AEP)...CARBON 100 5% 1/4W
R301	1-247-107-00	(UK).....CARBON 100 5% 1/4W F
R302	1-247-171-00	CARBON 47K 5% 1/4W
R303	1-247-155-00	CARBON 10K 5% 1/4W
R304	1-246-519-00	CARBON 82K 5% 1/4W
R305	1-246-519-00	CARBON 82K 5% 1/4W
R306	1-247-083-00	CARBON 10 5% 1/4W
R307	1-247-131-00	CARBON 1K 5% 1/4W
R308	1-247-131-00	CARBON 1K 5% 1/4W
R309	1-247-083-00	CARBON 10 5% 1/4W
R310	1-247-139-00	CARBON 2.2K 5% 1/4W
R311	1-247-139-00	CARBON 2.2K 5% 1/4W
R312	1-246-485-00	CARBON 3.3K 5% 1/4W
R313	1-246-485-00	CARBON 3.3K 5% 1/4W
R314	1-247-155-00	CARBON 10K 5% 1/4W
R315	1-246-529-00	CARBON 220K 5% 1/4W
R316	1-247-135-00	CARBON 1.5K 5% 1/4W
R317	1-247-159-00	CARBON 15K 5% 1/4W
R318	1-247-131-00	CARBON 1K 5% 1/4W
R319	1-247-167-00	CARBON 33K 5% 1/4W
R320	1-247-155-00	CARBON 10K 5% 1/4W
R322	1-247-155-00	CARBON 10K 5% 1/4W
R323	1-246-529-00	CARBON 220K 5% 1/4W
R402	1-247-139-00	CARBON 2.2K 5% 1/4W

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ELECTRICAL PARTS

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R403	1-247-107-00	(AEP,G-AEP)...CARBON	100	5%	1/4W	
R403	1-247-107-00	(UK).....CARBON	100	5%	1/4W	F
R404	1-247-123-00	CARBON	470	5%	1/4W	
R405	1-247-099-00	(AEP,G-AEP)...CARBON	47	5%	1/4W	
R405	1-247-099-00	(UK).....CARBON	47	5%	1/4W	F
R406	1-247-155-00	CARBON	10K	5%	1/4W	
R407	1-246-442-00	CARBON	51	5%	1/4W	
R408	1-247-155-00	CARBON	10K	5%	1/4W	
R409	1-247-107-00	CARBON	100	5%	1/4W	
R410	1-246-485-00	CARBON	3.3K	5%	1/4W	
R411	1-247-147-00	CARBON	4.7K	5%	1/4W	
R413	1-247-179-00	CARBON	100K	5%	1/4W	
R414	1-247-179-00	CARBON	100K	5%	1/4W	
R415	1-247-179-00	CARBON	100K	5%	1/4W	
R416	1-246-443-00	CARBON	56	5%	1/4W	
R417	1-246-545-00	CARBON	1M	5%	1/4W	
R419	1-247-135-00	CARBON	1.5K	5%	1/4W	
R420	1-247-155-00	CARBON	10K	5%	1/4W	
R421	1-246-443-00	CARBON	56	5%	1/4W	
R501	1-246-480-00	CARBON	2K	5%	1/4W	
R502	1-246-485-00	CARBON	3.3K	5%	1/4W	
R504	1-247-167-00	CARBON	33K	5%	1/4W	
R505	1-247-147-00	CARBON	4.7K	5%	1/4W	
R506	1-246-527-00	CARBON	180K	5%	1/4W	
R507	1-247-155-00	CARBON	10K	5%	1/4W	
R508	1-247-155-00	CARBON	10K	5%	1/4W	
R509	1-246-529-00	CARBON	220K	5%	1/4W	
R510	1-247-179-00	CARBON	100K	5%	1/4W	
R511	1-247-155-00	CARBON	10K	5%	1/4W	
R512	1-247-155-00	CARBON	10K	5%	1/4W	
R513	1-247-179-00	CARBON	100K	5%	1/4W	
R514	1-247-155-00	CARBON	10K	5%	1/4W	
R515	1-247-155-00	CARBON	10K	5%	1/4W	
R516	1-247-155-00	CARBON	10K	5%	1/4W	
R517	1-247-151-00	CARBON	6.8K	5%	1/4W	
R518 ⚠	1-206-531-00	METAL OXIDE	68	5%	3W	F
R519	1-247-115-00	CARBON	220	5%	1/4W	
R520	1-247-179-00	CARBON	100K	5%	1/4W	
R525	1-247-171-00	CARBON	47K	5%	1/4W	
R550	1-247-111-00	(UK)....CARBON	150	5%	1/4W	F
R555	1-247-082-00	(UK)....SOLID	6.8		1/4W	F
R601	1-246-519-00	CARBON	82K	5%	1/4W	
R602	1-246-514-00	CARBON	51K	5%	1/4W	
R603	1-246-514-00	CARBON	51K	5%	1/4W	
R604	1-247-149-00	CARBON	5.6K	5%	1/4W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R605	1-247-147-00	CARBON	4.7K	5%	1/4W
R606	1-247-149-00	CARBON	5.6K	5%	1/4W
R607	1-246-545-00	CARBON	1M	5%	1/4W
R608	1-246-545-00	CARBON	1M	5%	1/4W
R609	1-247-147-00	CARBON	4.7K	5%	1/4W
R610	1-247-155-00	CARBON	10K	5%	1/4W
R611	1-246-499-00	CARBON	12K	5%	1/4W
R612	1-246-462-00	CARBON	360	5%	1/4W
R613	1-246-514-00	CARBON	51K	5%	1/4W
R614	1-247-149-00	CARBON	5.6K	5%	1/4W
R615	1-247-125-00	CARBON	560	5%	1/4W
R616	1-247-147-00	CARBON	4.7K	5%	1/4W
R617	1-247-151-00	CARBON	6.8K	5%	1/4W
R618	1-247-125-00	CARBON	560	5%	1/4W
R619	1-247-147-00	CARBON	4.7K	5%	1/4W
R620	1-246-504-00	CARBON	20K	5%	1/4W
R621	1-246-460-00	CARBON	300	5%	1/4W
R622	1-246-480-00	CARBON	2K	5%	1/4W
R630	1-247-147-00	CARBON	4.7K	5%	1/4W
R631	1-247-147-00	CARBON	4.7K	5%	1/4W
RT201	1-226-238-00	RES, ADJ, CARBON 50K			
RT301	1-228-505-00	RES, ADJ, METAL GLAZE 10K			
RT302	1-226-238-00	RES, ADJ, CARBON 50K			
S1	1-554-266-00	SWITCH, ROTARY SLIDE (BAND)			
S501	1-552-174-00	SWITCH, PUSH (TUNING/-)			
S502	1-552-174-00	SWITCH, PUSH (TUNING/+)			
S503	1-552-174-00	SWITCH, PUSH (STEREO/MUTING)			
S504	1-552-174-00	SWITCH, PUSH (MEMORY)			
S505	1-552-174-00	SWITCH, PUSH (1)			
S506	1-552-174-00	SWITCH, PUSH (2)			
S507	1-552-174-00	SWITCH, PUSH (3)			
S508	1-552-174-00	SWITCH, PUSH (4)			
S509	1-552-174-00	SWITCH, PUSH (5)			
S901 ⚠	1-554-539-00	SWITCH, PUSH (POWER)			
T301	1-235-126-00	(G-AEP)....ENCAPSULATED COMPONENT			
T401	1-405-927-00	COIL, MW OSC			
T406	1-406-069-00	COIL, LW OSC			
T407	1-402-080-11	COIL, ANT (MW)			
T408	1-402-081-11	COIL, ANT (LW)			
TM901	1-536-705-41	(AEP,UK)...TERMINAL BOARD (SP)			
TM901	1-536-743-00	(G-AEP)....TERMINAL BOARD (ANTENNA)			
XT601	1-527-995-00	VIBRATOR, CRYSTAL			

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.